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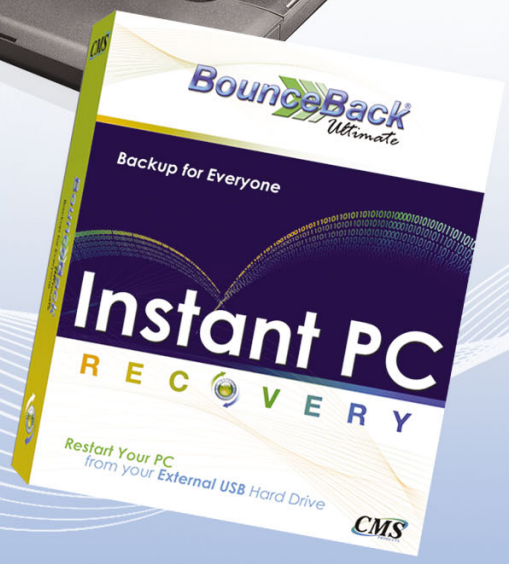

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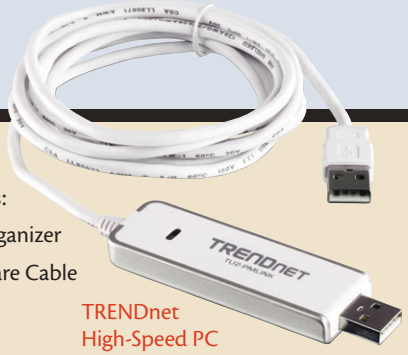

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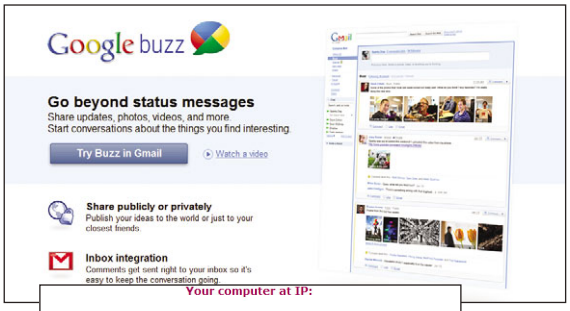

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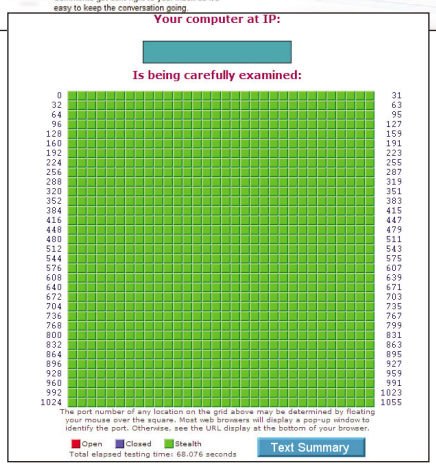

Security

Editor's Note

The "you get what you pay for" rule doesn't always apply to computers. A high price tag doesn't necessarily mean that it's a better computer (for your purposes) than an inexpensive PC. It also doesn't mean that the computer will last significantly longer. And, no matter what you spend on a PC, you can expect to encounter problems that you'll need to fix (or have someone fix for you).

We know why that is, of course. Generally speaking, complicated tools require repair more often than uncomplicated ones. (There's a reason a support industry hasn't sprung up around screwdrivers.)

PCs are complex. They have plenty of parts that can break, get jammed, or (under particularly grim circumstances) even melt. And that's just hardware. Throw in an operating system, third-party programs, and the occasional virus, and problems are inevitable.

Smart Computing is here to help you with everything that "you get what you pay for" doesn't. Our buying tips help you find the computer that meets your needs. Our maintenance articles help you extend the life of your computer. And, this month, our solutions will help you solve some of the most common and frustrating PC errors.

Joshua B. Gulick

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Compiled by Christian Perry

DESKTOPS & LAPTOPS

MSI Sends A Subtle Notebook Reminder

While the hype around netbooks and tablet PCs remains sky-high, make no mistake that the market for standard notebooks remains strong. Sure, netbooks are gradually sporting faster processors, but even the fastest of them fail to outperform even midrange notebooks. Four recent releases from MSI (us.msi.com) mirror the venerable notebook's continuing popularity and impressive power.

Based on Intel's Arrandale platform, MSI's new CR620 series notebooks use either Core i3 or Core i5 processors and have 4GB of DDR3 (double-data-rate 3) RAM along with 15.6-inch, 16:9 cinematic HD (high-definition) displays. Each notebook also has integrated 802.11b/g/n wireless, a 4-in-1 card reader, 1.3MP (megapixel) Web cam, a 6-cell battery, three USB 2.0 ports, an ExpressCard slot, and an HDMI (High-Definition Multimedia Interface) output. All of the models include Windows 7 Home Premium.

Despite the hefty specifications, these CR620 notebooks have a thin design and weigh just 5.46 pounds. MSI's chiclet keyboard is designed to cut back on typing errors and boost comfort, and it also reduces the noise of key presses. These models also feature MSI's exclusive Eco Engine, a power management system that extends battery time during certain tasks. For example, if you're watching a movie, just tap the Eco quick-launch touch sensor and select Movie mode. There are also modes for Gaming, Presentation, Office, and Turbo Battery.

Sporting a scratch-resistant, cross-hatch exterior and powerful Intel Core i3 and i5 processors inside, MSI's CR620 series notebooks strike a useful balance between design and performance.

The CR620-030 ($729.99) has a Core i3-330M (2.13GHz) processor, 320GB SATA (Serial Advanced Technology Attachment) hard drive, and DVD drive. The CR620-031 ($829.99) has a Core i5-430M (2.26GHz) processor, DVD drive, and 500GB SATA hard drive, while the CR620-033 ($799.99) has a Core i3-330M processor, 320GB hard drive, and Blu-ray combo drive.

Also new is the CR600-234 ($599.99), which includes an Intel Pentium T4500 (2.3GHz) dual-core processor, 3GB of RAM, a 320GB hard drive, and GeForce 8200M integrated graphics (the other three models have Intel GMA HD graphics). This model has a slightly larger (16-inch) display and includes a DVD drive as well as MSI's Color Film Print technology, which boosts the color of the exterior and helps to reduce fingerprints.

That's a rundown of what these notebooks include, but you should be aware of what they *don't* include. Like other MSI notebooks, these models aren't packed to the gills with software that often bloats mainstream computers. If you don't enjoy being bombarded with manufacturer-specific toolbars and other software when you boot your new computer, check out MSI's products.

STORAGE

SSDs Reach The Reasonable Price Range

If price has been the primary barrier to your adoption of SSDs (solid-state drives), it's time to take a second look. Although the storage capacities of SSDs still won't blow your socks off, prices are dropping low enough to at least give consumers a viable storage alternative.

One of the lowest-priced contenders in the SSD realm is the OCZ Onyx (www.ocztechnology.com). Retailing for less than $100, the Onyx SATA II 2.5-inch SSD is an MLC (multi-level cell)-based drive that features 125MBps (megabytes per second) read speeds and 70MBps write speeds, along with 64MB of onboard cache and performance optimization features. The downside of this low-cost drive is that it provides only 32GB of capacity, but if your goal is speed over storage, the Onyx could be a suitable introduction to the SSD world.

Intel (www.intel.com) also has boarded the low-cost SSD bandwagon with the introduction of its X25-V Value SSD, which is priced at $125. This drive offers a bit more storage (40GB) than OCZ's offering as well as sustained sequential read and write speeds of 170MBps and 35MBps, respectively. Like other SSDs, the X25-V is built to last, with an MTBF (mean time between failures) rate of 1.2 million hours.

For less than a hundred bucks, OCZ's Onyx drive gives even budget-strapped consumers an opportunity to dip their toes in the speedy waters of SSD technology.

DISPLAYS

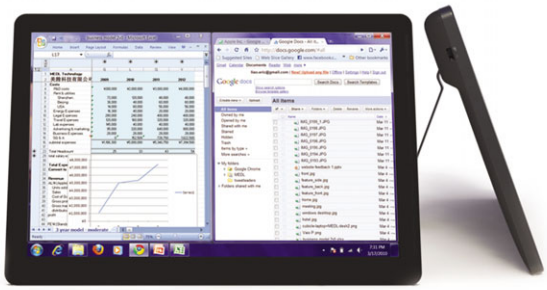
Lightweight Panel Extends Your Mobile Display

If your laptop's display isn't quite big enough, why not consider adding another? That will be possible with an upcoming device from MEDL Technology that's both portable and lightweight.

The MEDL Panel (www.medltech.com) is a 13-inch LCD that weighs just 2.2 pounds and connects to laptops through a USB connection. According to the company, the Panel is ready to use within 10 seconds after the connection is made. The monitor is designed for portability and won't drain your laptop's battery, thanks to its internal, rechargeable lithium-ion battery that has a five-hour battery life.

The Panel is an LED (light-emitting diode)-backlit, TFT (thin film transistor) active-matrix display with a maximum resolution of 1,280 x 800 and a contrast ratio of 400:1. Several slots are onboard, including mini-USB, mini-HDMI, VGA (Video Graphics Array), component, S-Video, and DVI (Digital Visual Interface). A sturdy pullout leg lets you rest the panel at a comfortable angle on any flat surface.

Although laptop users are certainly a primary target for the Panel, MEDL notes that the monitor will also work with iPhones, iPods, portable video players, DVD players, and gaming consoles. Although MEDL Tech has already unveiled a working prototype of its new product, the release date and price remain unknown.



The MEDL Panel is a light, portable LCD monitor that can extend the display of your laptop, iPhone, iPod, or almost any other mobile device.

PRINTERS & PERIPHERALS

Inkjet Printing For The Cost-Conscious

Printers endure plenty of wear and tear, leading to lifetimes that typically are far shorter than those of computers and other devices. With this in mind, it's tough to justify paying an arm and leg for a basic inkjet printer, which is why Canon's Pixma iP2702 seems to hit a sweet spot.

Despite the low price of the iP2702 ($49.99; www.usa.canon.com), this inkjet offers color resolutions at up to 4,800 x 1,200 dpi (dots per inch) and can print 4- x 6-inch borderless color photos in about 55 seconds. The printer uses Canon's FINE (full-photolithography inkjet nozzle engineering) technology, which employs a patented print head that delivers ink droplets as small as two picoliters. When stored in archival-quality photo albums, photos printed using the company's ChromaLife100+ system (a combination of FINE, Canon inks, and Canon photo paper) can last up to 300 years.

The iP2702 also features Auto Photo Fix II as part of the included EasyPhoto-Print EX software, helping users automatically correct color and other problems with photos before printing. Canon also provides free access to its Creative Park (cp.c-ij.com/en), which includes Pixma print materials such as greeting cards, envelopes, stationery, paper crafts, calendars, and much more.

For about $50, Canon's Pixma iP2702 offers high print resolutions and can print photos that last up to 300 years under the right conditions. Also included are automatic color correction and similar photo-enhancing tools.

CPUs, CHIPS & CARDS

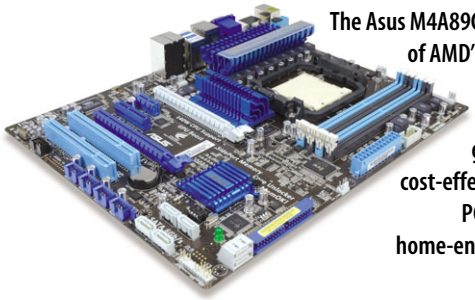
Home Entertainment The Integrated Way

With powerful media players such as the Boxee Box (www.boxee.tv/box) and Popbox (www.popbox.com) around the corner, it's getting tougher to justify building a PC solely for home entertainment. After all, media players such as those provide just about everything you need for home video purposes for a couple hundred bucks or less.

But don't expect chip manufacturers to let the concept of affordable home-entertainment PCs slip through their hands. AMD (www.amd.com), for example, has unveiled its 890GX chipset and ATI Radeon HD 4290 integrated graphics technology to help fuel the creation of efficient, slim, and affordable home-theater PCs.

The 890GX chipset supports SATA 3.0, USB 3.0, Gigabit Ethernet, HyperTransport 3.0, and PCI (Peripheral Component Interconnect) Express 2.0. Although motherboards carrying these technologies would be impressive on their own, consumers looking for cost-effective home-entertainment systems can take advantage of the HD 4290 onboard video, which surprisingly doesn't boost the price of supported motherboards as much as you'd think.

For instance, the Asus M4A89GTD retails for about $140 and supports 1080p Blu-ray playback; DVD upscaling; Blu-ray/HD decoding; and formats such as MPEG-2, H.264, and VC-1. Interestingly, this motherboard also includes a hardware-level core unlocker that helps consumers "unlock" unused cores on dual- and tri-core processors.



The Asus M4A89GTD takes advantage of AMD's new 890GX chipset and ATI Radeon HD 4290 integrated graphics, providing a cost-effective route for home PC builders to create a home-entertainment system.

DIGITAL MISCELLANEA

LifeCams Breathe New Life Into Web Cam Image Quality

Finding the right Web cam can be a relatively grueling experience, particularly if you're picky about image quality. If you need better Web cam performance, check out Microsoft's newest LifeCams, which feature the company's advanced TrueColor technology.

TrueColor is an image processing function that analyzes the environment around you and automatically adjusts the LifeCam to ensure your transmitted video is bright and colorful. TrueColor works in part thanks to face tracking technology from Microsoft Research that detects a face and determines if it is overexposed or underexposed. The ultimate goal is to provide optimum image quality even in less-than-ideal lighting situations.

The new lineup includes the HD-5000 and HD-5001 ($49.95 each; www.microsoft.com), which offer 720p HD widescreen video and have a flexible attachment base designed to accommodate various surfaces, such as the top of flat-screen monitors, notebook screens, or desktop surfaces. Of course, network speeds and video chat software can have a negative impact on video chat quality, even though you're using such an advanced video camera.

The HD-5001 is a Best Buy exclusive and has a custom design with a white faceplate. The LifeCam HD-6000 for Notebooks ($59.95) can rotate 360 degrees to give notebook users the freedom to point the camera in any direction. This model also has a compact design, a shorter (three-foot) cord, and a carrying case.

New LifeCam models from Microsoft feature the company's TrueColor technology, which enables the Web cams to automatically sense the environment around you and optimize the video to accommodate the conditions.

PROBLEM-SOLVER: TROUBLESHOOTING THE NEWS

Windows indicates that one of my hard drives is corrupted and unreadable.

If you're receiving an error message such as this when you click one of your hard drives in Windows Explorer, download and run CrystalDiskInfo (free; bit.ly/UKzt0), which will determine whether your drive has indeed failed. Because potentially fixable problems (such as file system errors) can lead to this error message, it's best to double-check before assuming the drive is completely dead.

My laptop manufacturer wants $400 to replace my cracked LCD screen.

Because LCD screen replacement often costs more than the actual value of a laptop, consider ordering a new LCD (from an online retailer or auction site) and replacing it yourself for a fraction of the cost. Manuals are available online that provide relatively easy instructions for the display replacement.

My printouts have dots of ink all over them instead of being uniform.

This is usually an indication that your printer isn't using the correct settings for the paper. Before printing, check the print window and double-check that you have the proper paper selected. If you're not sure what to use, check the package that your paper came in or check the paper manufacturer's Web site for the selection instructions.

My newly built PC powers on for a few seconds and then shuts down.

If you just assembled a computer and it stays on for only a few seconds, it might be having electrical short problems. Place the motherboard outside of the case and try booting the computer. If it works, check that you're screwing in the motherboard only with holes that are designed to hold the motherboard in place. If you're not sure about a certain screw hole, don't use it at all. Also, be sure to place standoffs (small screws that have holes to accept motherboard screws) between the motherboard and the motherboard tray.

MOBILE TECHNOLOGY

This Smartphone Endures Every Element

Even the least klutzy consumers drop their mobile devices now and again. But if the most common resting place for your smartphone seems to be the ground or even a pool of water, it might be time to check out a rugged model such as Casio's G'zOne Brigade.

With built-in resistance to water, shock, vibration, immersion, dust, humidity, salt fog, altitude, solar radiation, and high and low temperature storage, the G'zOne ($249.99 after $50 rebate and two-year service plan; www.verizonwireless.com) is equipped to handle just about any harsh environment. And these aren't just claims from a manufacturer that slapped some rugged material on a phone and said the phone is hereby resistant—Casio put the G'zOne through several military-grade tests.

For example, the G'zOne was dropped 26 times (in nonoperating mode) onto each face, edge, and corner from 4.9 feet, and the phone powered on each time. The phone was also tested in both open and closed positions for 30 minutes on its front and 30 minutes on its back with simulated rainfall of 2 inches per hour with a 40mph wind. Other tests included 96 hours in a 180 degrees Fahrenheit room, 96 hours in a -13 degrees room, one-hour exposure to room pressure equivalent to an altitude of 15,000 feet, and immersion in 3.3 feet of water for 30 minutes. The G'zOne passed all of these tests, as well.

Will your phone work after being submerged in water for 30 minutes? Casio's G'zOne Brigade will, and it will also survive brutally high and low temperatures, drops on hard surfaces, and other rough conditions.

Aside from the tough-guy stuff, the G'zOne also packs in some impressive smartphone features. The phone has a numeric keyboard and small PM-OLED (passive-matrix organic LED) screen on the outside, and it flips open to reveal a 2.9-inch TFT display and QWERTY keyboard on the inside. The G'zOne also has a four-way keypad with center select, dedicated message keys for one-touch access to messaging functions, text-to-speech technology that instantly transcribes text messages and emails, integrated GPS (global positioning system), and Bluetooth.

Also onboard are a document viewer for reviewing PDF (Portable Document Format) files and Microsoft Word documents, Excel spreadsheets, and PowerPoint presentations. The phone also has a 3.2MP camera with flash, video capture, and LED light as well as Best Shot technology that includes six presets and automatically alters the camera's settings to mesh with the background. The camera also includes auto focus that provides single-point, nine-point, and face detection.

DULY QUOTED

"It's pretty sad that he has to ask me to accept his friends when I get to work."

—Kelli Fields describes the cyber-perils of her son, who avoids using his family's slow dial-up connection by asking his mother to update his Facebook page from her broadband connection at work. The United States ranks only 17th in adoption of information and communication technologies, according to a 2009 study by the International Telecommunications Union.
Sources: CNN.com; The Washington Post

News From The Help Desk

Our Most Common Tech Calls

COMPILED BY KRIS GLASER BRAMBILA

Each month, we receive numerous technical support calls and email messages. Some computer problems are fairly common, and we find that many callers struggle to resolve the same issues. In this article, we cover some of the most common or timely tech support questions and provide our solution for each of them.

Q I recently received an email from a family member that included photo attachments. The pictures they sent have low resolutions, but I want to print them as 4- x 6-inch pictures. Is there a way to increase the number of pixels in a photo so that prints will be sharp?

A It's possible to take a digital photo with a low resolution and make it bigger, but that doesn't mean the larger image will be as clear or sharp as the original. If you attempt to enlarge a small image too much, the larger image will be pixilated, meaning you will be able to define the individual dots that make up the image, and the picture as a whole will be blurry, fuzzy, and sometimes difficult to recognize.

Your best bet would be to request larger images from the sender. Ask for their original picture files, if they are bigger. If the sender doesn't have larger versions of her pictures, you can try experimenting with an image-resizing application such as IrfanView (www.irfanview.com) or VSO Image Resizer (www.vso-software.fr).

Q I recently bought new speakers for my computer. I have tried plugging the speakers into both the motherboard and my sound card, but I keep getting a message from Windows telling me that there are no speakers attached. The Device Manager says the speakers are working, so what could be wrong?

A Whenever your speakers aren't delivering sound, always start with the easiest fixes. First, check to make sure your speakers are plugged into the correct jacks on either your motherboard or your sound card. Next, ensure the volume controls are turned up and that the main volume isn't muted.

If the previous suggestions don't solve the problem, you might try attaching the speakers to another computer to see if they work correctly. If the speakers deliver audio from the other computer, you can rule out an issue with the speakers themselves, then move on to the following suggestions.

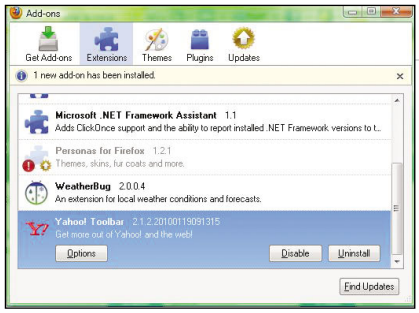
Next, check for driver updates for either your motherboard's onboard audio or your sound card. An easy way to check for updates is to open the Device Manager. In Windows XP, go to the Control Panel, double-click System (in Classic view), and then choose Device Manager under the Hardware Tab; in Windows Vista and Windows 7, go to the Control Panel, choose System and Maintenance (System And Security in Win7), then Device Manager. Locate the sound controller and your device (either the integrated card on your motherboard or your separate sound card), right-click, and choose Update Driver or Update Driver Software. You can also visit your sound card or motherboard manufacturer's Web site to search for driver updates.

Q After installing a new version of Mozilla Firefox, I suddenly have the Yahoo! Toolbar in my browser. I didn't ask for the toolbar, and I'd rather not use it. How can I get rid of it?

A If you've recently updated Firefox and discovered the Yahoo! Toolbar residing at the top of your browser window, it's possible that it was installed during the setup process or was automatically loaded as an extra feature when you installed another program.

Removing the toolbar from your browser is easy. In Firefox, go to Tools and choose Add-Ons. Under the Extension tabs, locate the Yahoo! Toolbar. You are given the option to either Disable the toolbar or to Uninstall it. Disabling the toolbar will remove it from the top of your browser window but keep it installed in case you would like to use it later. Uninstalling the toolbar will remove it from Firefox altogether. When either disabling or uninstalling an add-on, you may have to restart Firefox before the changes take effect.

If you uninstall the Yahoo! Toolbar but decide later that you still want to use it, you can reinstall it by clicking the Get Add-Ons tab in the Add Ons window and typing **Yahoo! Toolbar** in the search field, locating the add-on, and clicking Add To Firefox.



The Yahoo! Toolbar may have been installed with your latest Firefox upgrade, but you can remove it with just a few clicks.

If you've recently updated Firefox and discovered the Yahoo! Toolbar residing at the top of your browser window, it's possible that it was installed during the setup process or was automatically loaded as an extra feature when you installed another program.

Q I have a PDF (Portable Document Format) file that I want to convert into an RTF (Rich Text Format) file. Is it possible to change a PDF into a regular text file like this?

A There are a couple different ways you can extract text from a PDF file and put it in a word processing document. First, you can select and copy the desired text from the PDF file and then paste it into Microsoft Word, WordPad, or any other text editor. Although this method successfully moves the text from one format to another, it doesn't retain any of the PDF's formatting and may require you to organize and edit the text in its new format.

A more efficient solution might be to use a PDF converter, which is an application that can import the data in any PDF file into another program, such as Microsoft Word. There are several PDF converters available, including 1-2-3 PDF Converter (www.123pdfconverter.com), which is free to try and $79.90 to buy. You can try 1-2-3 PDF Converter by navigating to the Web site and clicking Free Trial under the PDF Converter section, then clicking Click Here To Directly Download Your 1-2-3PDFConverter.

Once the information from your PDF file has been transported to another format (such as Microsoft Word), you can save the file in whatever format you wish, such as RTF, DOC, or HTML (Hypertext Markup Language).

Q The other day while I was at work, I noticed one of my co-workers had a screen saver on her computer that displayed several pictures from her recent vacation. How can I make my screen saver display a slideshow?

A You can change your computer's screen saver to present a slideshow of personal pictures with just a few clicks. In WinXP, go to the Control Panel and choose Display in Classic View. On the Screen Saver tab, use the drop-down menu to select My Pictures Slideshow as the screen saver type. Next, click the Settings button and click Browse next to Use Pictures In This Folder. Select the folder where your pictures are stored and click OK. From this window, you can also change options for how often the pictures change and how large the pictures will be.

In Vista and Win7, go to the Control Panel, Appearance And Personalization, Personalization, and Screen Saver. Choose Photos from the drop-down list and then click Settings to choose which pictures folder you want to use.

You can show off your favorite pictures by displaying them as your screen saver.

If you'd like to display photos from several different folders, create a new folder called Screen Saver Photos and deposit all of your favorites. Then, choose this folder when selecting which photos you want to use for the screen saver slideshow.

Feature Package Topics

Each *Smart Computing* issue includes tips, reviews, and information about a variety of topics. However, each issue also has a featured group of articles about a selected topic. Below is a list of the Feature Packages from the previous year. As a *Smart Computing* subscriber, you have access to all of our archived articles at www.smartcomputing.com.

June 2009	Get More Mileage Out Of Your PC
July 2009	8 PC Emergencies
August 2009	Stay Safe Online
September 2009	Master Your Browser
October 2009	Driver Updates
Fall Issue	Upgrade Your PC
November 2009	Windows 7
December 2009	Holiday Gift Guide
January 2010	Maintain Your Family Computer
February 2010	Upgrade Your Notebook
March 2010	Troubleshoot Windows 7
April 2010	Clean Your Computer

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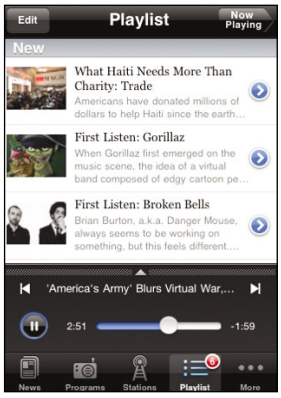

NPR News

Mobile apps are big business. Need proof? A study that app seller GetJar (www.getjar.com) recently commissioned found the sector will be worth $17.5 billion by 2012 and app downloads will total nearly 50 billion vs. 7 billion last year—a 92% growth rate. Apple alone has had more than 3 billion downloads from its iTunes App Store (tinyurl.com/mq74vo), which contains about 150,000 apps. Google's Android Market (www.android.com/market) has accumulated about 30,000 apps in its relatively short existence, and RIM's BlackBerry App World (appworld.blackberry.com) has about 5,000.

Admittedly, I'm an app addict. I can easily piddle away hours just searching for apps, let alone using them. The devices currently enabling my obsession are a BlackBerry Storm 9550 and Apple 8GB iPod touch. With the Storm, I can download apps via Verizon Wireless' 3G coverage. The touch limits me to the reach of a Wi-Fi network.

Compared to the BlackBerry App World, Apple's better-known App Store is a noticeably smoother experience, partly due to the touch's slick touchscreen interface and partly to the App Store's seamless execution in searching, downloading, and installing apps. Though the experience on the Storm is clunkier, the App World's smaller selection means finding what you're after is less of a needle-in-a-haystack prospect. Both stores do well in highlighting new and featured apps, categorizing apps, providing user reviews, and touting top free and paid choices. Conveniently, the Storm lets me archive apps to a memory card, which the touch doesn't.

As bad as my app addiction is, I've only purchased two: Skee-Ball (99 cents; cheesy but fun) and PRS JamAmp ($9.99; worth every penny for satisfying my guitar addiction). Though there are dozens of apps I'd pay for given the means, there are so many great apps available free, I haven't felt compelled to buy many. The following are three of my favorite (not necessarily the best) apps for each platform starting with three for the iPod touch.

CauseWorld. Upon launching CauseWorld, it uses my touch's integrated location services to present a list of nearby stores. After checking in to a store, I receive karma points I can donate to such causes as preventing child abuse and fighting cancer. Corporations turn the points into actual monetary donations in exchange for a marketing presence on my touch and Facebook page.

NPR News. This app alone could keep me occupied 24/7. Beyond reading and listening to news, I can stream "All Things Considered," "Car Talk," and other NPR goodies live or via archives. I can also subscribe to programs' podcasts, search and listen to live stations, save stations as Favorites, and create playlists.

Wolfgang's Vault Concert Vault. For live music lovers, this app is a must. Wolfgang's Vault touts itself as owning the world's largest live concert collection, and this app lets me listen to scads of them, including from Neil Young, Willie Nelson, Ralph Stanley, and Dave Brubeck. I can also listen to Wolfgang's Vault's radio stations, and registered members can access saved playlists and favorite concerts.

AP Mobile. This app, which I use on my BlackBerry, is an example of why so many people are canceling their newspaper subscriptions. Besides world, national, local, sports, and other news offerings, AP Mobile offers scads of great photos and lets me save articles to read offline, view Highly Rated articles, and share articles via Facebook.

Poynt. Whether finding the cheapest gas prices, ordering a pizza, finding movie times and buying tickets, or making dinner reservations, Poynt for the Blackberry provides a one-stop launching pad to do it easily. Poynt can also track down people and businesses, provide up-to-date weather info, and point me in the right direction via Google maps. Better, the interface is dead-easy to navigate.

Viigo for BlackBerry. As others have stated about Viigo, this app is easily the most used on my BlackBerry. Why? It fills so many needs from one, simple interface. Be it homing in on specific news, sports, entertainment, technology, or political coverage; tracking flight and travel information; listening to audio podcasts; finding local attractions; accessing Twitter; finding weather info; or even calling for a cab, I can do it via Viigo.

Sleeptracker Elite
Skip The Snooze Button

LINNÉ OURADA

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LINNE@SMARTCOMPUTING.COM

I'm not a morning person, and that's a bit of an understatement. The alarm goes off, and I automatically reach for the Snooze button. Snooze. Snooze. Snooze. This happens about five times each morning, and the little gray dog curled up at the foot of my bed doesn't offer much support, as he doesn't even flinch at the sound of the alarm.

As a follow-up to the sleep monitoring portion of my last column, I decided to dig a little deeper into my restlessness. This month, I tested the Sleeptracker Elite, a sleep monitoring watch that gathers sleep data and then uploads it to your PC. (The company says Mac-compatible software is expected to be available by the end of this year.) It also has an alarm that attempts to wake you at the most optimal time so you feel refreshed and alert rather than half asleep and groggy. Needless to say, I was the perfect subject for the testing.

Sleeptracker Elite
$179
Innovative Sleep Solutions
(800) 617-4509
www.sleeptracker.com

The Sleeptracker looks like an ordinary sports watch, with men's and women's versions. (They look identical, except for the color.) The watch has standard features, including time, date, and two alarm functions (vibrate and audio) with a snooze feature (in case you can't let that extra 10 minutes go). It's also water-resistant and has a glow backlight.

To configure the watch for your first night of monitoring, the comprehensive users manual walks you through the steps to set the time and alarm. You also can select a window of time in which you need to be awakened. For instance, if you need to be up by 6:30 a.m., you can set a 20-minute window, and Sleeptracker will monitor your body signals, determine your "almost-awake" moments, and then wake you at the best possible time when you are most alert.

To upload your data, install the included software and connect the Sleeptracker to your computer via the included USB cable (the watch must be set to Data Mode in order to upload your information). The data is charted by date, so that over the course of weeks or months, you can begin to see your sleep patterns and the times you are awake (or nearly awake) each night. The information is editable, so I could add notes to myself.

Sleeptracker gave me some insight into a few factors that could be affecting my sleep patterns. For one, I tend to have a bad habit of eating late meals, which is followed by my second bad habit: exercising even later. (The list of factors doesn't account for a naughty little shih tzu who wakes you up in the middle of the night for attention or late-night kibble.) Other factors that Sleeptracker asks you to consider: Did you have drinks before bed? Was it a particularly stressful day? Was your sleep environment unusually hot or cold? Did the garbage truck or other loud noises play a role? These and other factors help you recall the possible distractions influencing your sleep.

The Sleeptracker Elite is an interesting concept. But, if you really want to get an accurate glimpse into the how and why of your nightly sleep patterns, you must be adamant about uploading your data regularly. Sleeptracker does not store several days' worth of information, so it's up to you to connect the device each day, recall what factors may have impacted your sleep, and so on. You also need to be patient in analyzing your data. Your sleep patterns aren't going to change overnight, so it's important to let the device do its job in collecting info and providing you with an inside look to how you can potentially adjust a few things to get the best rest possible.

Despite my hate-hate relationship with mornings, there were some days when I was out of bed quicker and less drowsy. Sleeptracker must have succeeded in waking me up at the most opportune time. I don't know if I would go as far as saying I was "refreshed," but the gadget certainly gave its best shot, considering who it was working with.

According to Sleeptracker, the average time between my "almost-awake" moments is 49 minutes, 10 seconds. Meaning, on average, I can't go a full hour without being awake (or almost awake). However, according to the company, a person goes through multiple almost-awake moments per sleep cycle, but mine seem to happen quite frequently. After analyzing the patterns and factors, I've connected a few things to try to work on, starting with a serious sit-down conversation with a certain little ball of fur.

Pint-Sized & Powerful

Canon PowerShot SD1400 IS

TARA SIMMONS BANTAM

SEND YOUR COMMENTS TO
TARA@SMARTCOMPUTING.COM

It seems every time I go to a concert or family get-together and pull out my trusty digital camera, I notice everyone around me has a newer, shinier model. There appears to be no shortage of fresh consumer-oriented cameras on the market. And they seem to keep getting smaller, lighter, and more feature-packed (with both useful and frivolous additions). The PowerShot SD1400 IS from Canon, one of three new models in the company's popular Digital ELPH lineup, falls in the shiny, new category, but it offers more function than fluff.

The compact SD1400 was small enough to fit comfortably in my pocket at 2.2 x 3.6 x 0.7 inches (HxWxD), and it didn't weigh me down at just 4.7 ounces. Despite its size, the SD1400 feels sturdy, though the buttons are necessarily small. It took some time and fumbling to get a feel for the scaled-down buttons, but with use, it became more natural.

PowerShot SD1400 IS Digital ELPH
$249.99
Canon
(516) 328-5000
www.canon.com

The SD1400 has 14.1MP (megapixels), more than enough for the average user who wants to zoom, crop, and enlarge photos. It also has a respectable 4X optical zoom and a 28mm wide-angle lens. And despite the camera's small size, the 2.7-inch LCD felt spacious in my use, and framing shots was simple with the clear, bright screen. Navigating the on-screen menus to find main areas such as preset shooting modes was straightforward, but finding other settings such as white balance and color options (Sepia, Black And White, etc.) took some hunting. I did appreciate that the functions and settings are clearly labeled and even have short text explanations detailing their purposes. That's a great bonus for new and experienced (but manual-averse) users alike.

Besides Black And White and Sepia, other color settings include Vivid, Neutral, Positive Film, and Darker Skin Tones. The array of preset shooting modes includes Portrait; Kids & Pets; Indoor; Low Light; Fish-Eye Effect; and an interesting Miniature Effect, which blurs the top and bottom of a snapshot while focusing sharply on the main part of the image. The result is a cute miniaturized effect. (OK, this is one of those fluff-over-function features, but the results are pretty charming.)

In my use, the presets offered plenty of flexibility and produced clear, attractive results. It took some time to pick just the right preset for a given situation (the Kids & Pets setting is for any fast-moving subject, for instance), but when I did, the resulting images were well-lit and colors seemed accurate. One feature that stood out was Image Stabilization. Even in situations that are susceptible to minor hand movements, such as low-light settings and macro (ultra close-up) shots, photos were crisp.

The SD1400 also includes a standard self-timer, plus less-traditional methods of getting in on that group shot. The Smart Shutter scene mode offers smile detection (it snaps a photo when it senses a grin), face detection (it begins the timer countdown when it detects a new face in the frame, so you can press the button and take your time getting situated in front of the lens), and wink detection (activate the timer by winking at the camera) options.

The SD1400's size makes it ideal for toting just about anywhere. And the SD1400 can also record video clips in high-definition format (720p). While the results aren't as clear and smooth as those you'll get from a larger video camera, the SD1400 holds its own. Though, be sure to get a high-capacity SD (Secure Digital) card if you plan to shoot high-def video; 5.5 minutes of video in HD will eat up nearly 1GB of storage on your card.

The presets offer a nice range of options for less experienced users or those who are simply in a hurry. You can manually adjust select settings, such as the ISO (International Organization for Standardization), but this model is really built for point-and-shoot users. From above-average image quality to abundant features, users will find a lot to like in the SD1400.

Cheap Chassis Can Still Be Classy

Low-Buck Cases I Like

MARTY SEMS

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MARTY@SMARTCOMPUTING.COM

Lately I've been playing with more than a few computer cases. Here are a couple that might grab you.

Zalman Z7 Plus

If you place a high premium on quiet computing, great cooling, and easy upgrading, don't fret. With this chassis, you'll get all three without having to *pay* a high premium.

For about $75, Zalman's Z7 Plus supplies you with three big (4.7-inch), dust-filtered fans with adjustable speed control. They'll keep your PC parts cool without making a big racket. Better yet, the company throws in an extra 4.7-inch fan you can install yourself should you need to.

Five of its six (Six!) hard drive bays are outfitted with rubber grommets that help to eliminate noise by absorbing vibration. Furthermore, one of the six bays is suitable for installing a silent, 2.5-inch SSD (solid-state drive).

Z7 Plus
$74.99
Zalman
www.zalmanusa.com

Some users choose to reduce their CPU fan noise and their CPU temperature simultaneously by installing a third-party heatsink (something Zalman made its name selling, by the way). Thanks to a thoughtful cutout in a strategic spot, the Z7 Plus case lets you do this without having to remove the motherboard.

More pedestrian upgrades are simple with this case, too. In fact, you won't even need a screwdriver to install an expansion card or to add an optical drive to one of the four available bays.

The Z7 Plus might not be a good choice if you have a long graphics card and several hard drives, however. You would have your work cut out for you getting them all to fit around each other. In just about every other area, though, this reasonably sized midtower case is a winner.

AeroCool AeroRacer Pro

Here's one from my own home office. I have the black model, but I've included a snapshot of the red one here. AeroCool discontinued this case just before press time, but it's still available from various retailers online.

AeroRacer Pro
$99.99
AeroCool
(510) 661-9948
www.aerocool.us

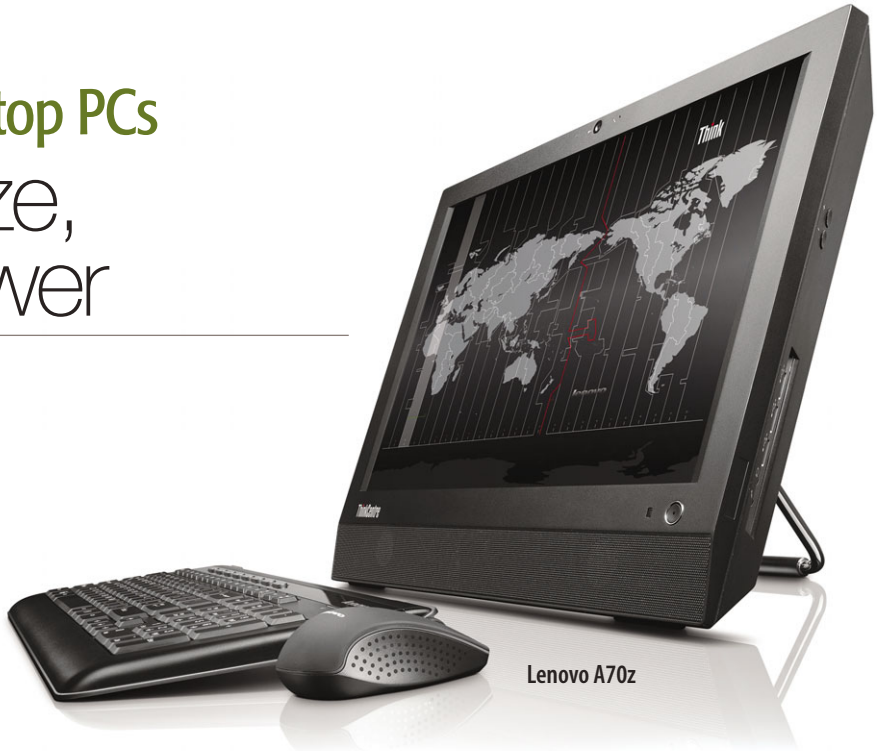
What drew me to the AeroRacer Pro was its outrageously huge fan. A 15.7-inch diameter blower resides in a finger-safe cage on the case's side panel. Because a big fan doesn't have to spin very fast in order to move a lot of air—more than 250cfm (cubic feet per minute) in this case—it's very quiet (especially compared with those in my last case, aptly dubbed the Windtunnel III). Nevertheless, it's powerful enough to send a breeze out of my DVD burner when its tray is extended. In fact, leaving aside the exhausts on my power supply and graphics card, the big side blower is my only case fan.

What I'm not crazy about with the AeroRacer Pro is the fact that its admittedly sharp-looking front door isn't removable. When it's closed, the door does make the computer look nice and snazzy, but it also hides the drive activity light. Moreover, it only opens from left to right. That design choice, along with the USB and other ports mounted along the left edge of the front panel, means that this case is really meant to sit to the right of the user.

That said, you don't need any tools to install a different type of drive or an expansion card. And apart from the door design, I'm really quite taken with the way my AeroRacer Pro has made my computing time more enjoyable. If silence is golden, this AeroCool takes the silver.

Head-To-Head: Desktop PCs

Smaller In Size, Bigger In Power



Lenovo A70z

If you haven't shopped for a desktop PC recently, you'll be surprised by what's available. The standard computer is now sharing shelf space with the all-in-one (in which the PC's components are built into the monitor) and the miniature system, which is extremely portable and saves desk space. Another trend is desktop computers featuring built-in options for multimedia use and playback, including memory card readers, BD (Blu-ray Disc) drives, and HDMI (High-Definition Multimedia Interface) outputs. This month, we check out desktop systems from iBuyPower, Lenovo, and Puget Systems.

Lenovo ThinkCentre A70z

The ThinkCentre is an all-in-one PC with a 19-inch widescreen LCD. It includes a handy kickstand bar on the back, which made the computer easy to put down when we moved it from place to place. Inside the A70z, Lenovo packed an Intel Core 2 Duo processor clocked at 2.93GHz, 2MB of memory, a 300GB hard drive, and a DVD burner. The total package weighed in at around 15 pounds.

The 1,400 x 900 resolution screen was bright and featured enough contrast to give movies rich darks. The A70z's built-in speakers are what you've come to expect from integrated monitor speakers: They operate at a relatively low volume and with little range. Still, the built-in speakers are better than nothing at all, and with the A70z's HD audio, you can plug in a set of headphones to the side of the computer to enjoy high-quality sound. Those who video-chat will appreciate the integrated 2MP (megapixel) Web cam and microphone, which are located on the monitor's bezel. The Web cam's video and audio quality were excellent in our tests.

We were impressed that Lenovo built six USB 2.0 ports (three on the back and three on the side) into such a small system. An 8X slim DVD burner is located on the side opposite the USB ports, and it ran extremely quietly during our movie test. The back of the A70z also offers a VGA (Video Graphics Array) port to extend your display to a second monitor as well as an Ethernet port for making a wired connection to the Web. Our test model also offered 802.11a/b/g/n Wi-Fi access. We like the inclusion of built-in Wi-Fi, because you wouldn't be able to add an internal adapter to the all-in-one, and a Wi-Fi dongle would use up one of your USB ports.

In terms of performance, the A70z is certainly capable with its fairly speedy system processor and Intel G41 Express graphics processor, which supports HD (high-definition) playback and the high-end gaming standards—including DirectX 10. DVD playback and HD content streamed from ABC's Web site were smooth.

Eco-conscious people will like that Lenovo designed the A70z to be Energy Star-compliant, and it includes ThinkVantage Technologies Power Manager software to help you set up a power plan that meets your needs. The ThinkVantage Rescue And Recovery tool is also handy, because you can create a backup of your personal files that can be recoverable at the touch of the ThinkVantage button. Overall, the A70z is perfect for people looking to save desk space or who want a system with a clean, elegant appearance. It's also feature-filled enough for those who demand performance. The A70z is available at CDW (www.cdw.com) and PC Connection (www.pconnection.com). IBM sells similar all-in-ones via its Web site.

iBuyPower Paladin E Series

This midsized tower boasts Bluetooth connectivity, 802.11b/g/n Wi-Fi, a 12-in-1 memory card reader, and a BD drive. Inside is a liquid-cooled processor (which means that iBuyPower installed a system that draws heat away using cold liquid rather than pulling it away with a fan). Other impressive features include a 1TB (terabyte) hard drive and a graphics card with an HDMI port.

BUYING TIPS

- **Memory Advice.** Many new PCs feature a 64-bit version of Windows 7. The primary advantage of a 64-bit operating system is the ability to use more than 4GB of memory. The 32-bit versions of Windows max out at 4GB. If you regularly edit video or operate a few powerful applications at the same time, you'll want to consider moving to a desktop with 6GB or 8GB of memory.

- **CPU Considerations.** Nearly all new desktops come with a multicore processor, which means that the CPU can break up tasks between two (or more) processor cores and utilize the power of each core. Typically, a desktop will include either a dual-core or quad-core processor, and the more cores the processor offers, the better it can handle intensive tasks. The CPU also features a speed, such as 2.93GHz, that each of the independent cores can operate at.

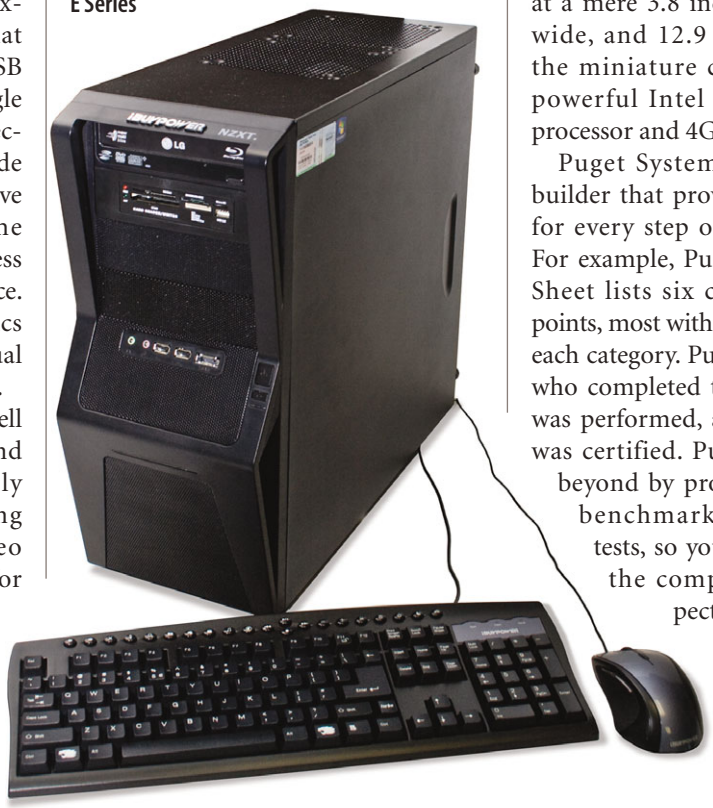
- **Do You Need A Graphics Card?** Some PCs include a dedicated graphics card, while others may use integrated graphics, which means that the graphics processor shares memory with the PC's RAM. Historically, you needed a dedicated graphics card to effectively play back video, but improvements in integrated graphics have made it possible to watch HD video and even play video games (though at low graphics settings) with built-in graphics. That being said, if you edit video at high resolutions, you'll want to invest in a system with a dedicated video card.

The Paladin E Series is housed in a midtower case with a built-in blue LED on the front of the system. At the top of the case, iBuyPower installed an optical drive that can read BDs at 8X and burn DVDs at 16X. The optical drive also supports LightScribe, which lets the drive's laser burn labels directly to the top of discs that support LightScribe. Underneath the optical drive sits a memory card reader that supports popular memory cards. There's also a front panel with audio, USB, and eSATA (external Serial Advanced Technology Attachment) ports; the latter can be used in combination with an eSATA hard drive or flash drive to transfer data at speeds comparable to your internal hard drive.

On the interior, iBuyPower nicely routed the cables so that air can flow through the case, and with the mesh exterior on the front and rear panels, there's plenty of air moving inside the case. iBuyPower installed a USB expansion module (a component that adds a few internal and external USB ports) and added a Bluetooth dongle to provide built-in Bluetooth connectivity that isn't visible from outside the case. The case offers space for five additional hard drives, and the iBuyPower case includes the tool-less hardware to snap the drives into place. The MSI ATI Radeon 5670 graphics card offers VGA, DVI (Digital Visual Interface), and HDMI video outputs.

The Paladin E Series performed well in our movie, online streaming, and benchmarking tests. It was nearly whisper-quiet, even when being stressed by power-hungry video games. And with its connectivity for Bluetooth and Wi-Fi, as well as its wealth of USB ports, it's a great system for people with a lot of peripherals and devices they want to connect to their PC. Fans of multimedia will also enjoy the BD drive and memory card support, which make it easy to turn the computer into a playback center for images and videos. For more information about iBuyPower systems, see the advertisement on the back cover of this issue.

iBuyPower Paladin E Series



Puget Systems Echo II

If you're in the market for a small desktop, Puget's Echo II is a perfect fit at a mere 3.8 inches high, 8.7 inches wide, and 12.9 inches deep. Inside the miniature case is a reasonably powerful Intel dual-core 2.93GHz processor and 4GB of memory.

Puget Systems is a boutique PC builder that provides documentation for every step of its quality control. For example, Puget's Quality Control Sheet lists six categories of checkpoints, most with around 10 tests under each category. Puget lists the employee who completed the check, the date it was performed, and the time the test was certified. Puget also goes a step beyond by providing you with the benchmark and performance tests, so you can be assured that the computer meets the expected performance.

Puget utilized Antec's ISK 300-65 case, which includes

Puget Systems Echo II

two front USB 2.0 ports, an eSATA port, and audio ports that are compatible with stereo and surround-sound formats. On the back of the case, you'll find six more USB 2.0 ports, another eSATA port, an optical digital output, an HDMI output, and a DVI output. The variety of connections for video and audio, in combination with the Echo II's small size, makes this system ideal for HTPC (home-theater PC) use. For airflow, the Antec ISK 300-65 case offers a front-mesh panel and honeycomb mesh openings on the top and side. Two fans on the side opening pull hot air out of the case. People considering this system for a living room or office environment will appreciate that it runs nearly silently. For a seamless look, the Sony 8X DVD burner is covered by a face plate that you can press to access the optical drive.

The Echo II we tested featured Zotac's H55ITX-A-E motherboard (www.zotac.com), which delivers built-in 802.11b/g/n Wi-Fi connectivity and provides support for the newest Intel Core i3 and i5 processors. The tight spaces inside the Echo II required Puget to cleanly organize all of the interior cables to allow for airflow and reduce heat. The cables were nicely arranged, and we like that Puget hot-glued the SATA and internal USB cables to the motherboard, so that the connectors won't become disconnected during transport. Securing the plugs with hot glue is an especially wise move in a miniature case where it can be extremely difficult to see or reach many of the internal connections.

In our movies and Internet streaming tests, the Echo II delivered smooth playback of HD video and DVDs. The inclusion of the HDMI output means that you'd only need to connect an HDMI cable to enjoy PC content on your HDTV. The Echo II is more than adequate for everyday office tasks.

Desktop Decision

As you can see, desktops now come in all shapes and sizes. If you're looking for power over portability, we'd select iBuyPower's Paladin E Series. Those short on desk space will like the all-in-one design of Lenovo's A70z or the small size of the Puget's Echo II. We think the Echo II would also be a nice fit as an HTPC.

BY NATHAN LAKE

PRODUCT INFORMATION

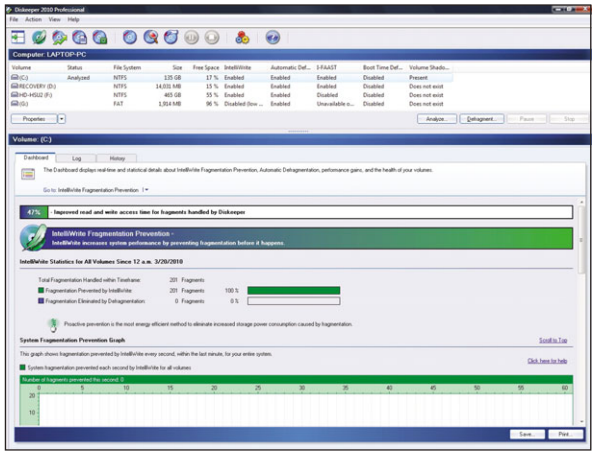
Model	Price	Company	Contact Information	URL	Notable Features	PCMark Vantage Overall Score
Paladin E Series	$1,042.00	iBuyPower	(888) 462-3899	www.ibuypower.com	A powerful midtower system that can play back Blu-ray Discs and offers built-in connectivity for 802.11b/g/n, Bluetooth, and popular memory cards.	8128
A70z	$729.00	Lenovo	(866) 968-4465	www.lenovo.com	This all-in-one computer includes a 19-inch screen and is powerful enough to support everyday office work and multimedia playback.	4547
Echo II	$999.33	Puget Systems	(425) 458-0273	www.pugetsystems.com	The miniature Echo II delivers on both portability and performance. It even offers eight USB ports, two eSATA ports, and an HDMI output.	5859

Unobtrusive Defragmentation
Diskeeper 2010

$39.95 | Diskeeper
(800) 829-6468 | www.diskeeper.com

WinXP Vista Win7

Diskeeper 2010 is the latest edition in a long series of products stretching back to Windows 95, when Microsoft tapped Executive Software (now Diskeeper) to build its defragmentation utility into the OS (operating system). Since then, this previously rudimentary defrag program has become far more sophisticated. Diskeeper 2010 is so efficient and easy to use that keep-it-simple types will adore it.



Key Features: On-the-fly file defragmentation of existing files with technology that limits future fragmentation, as well.

Install With Ease

The first place Diskeeper's user-friendly nature shows up is during installation. You don't have to close any running applications to install this product, so your workflow won't be interrupted, and handy options that turn on automatic defragmentation and run the activation routine are checked by default.

A checkbox that brings you news and information from Diskeeper (which you might or might not want to receive) is also checked; uncheck it if you don't want to receive these updates. The option to create a Desktop icon is also not checked by default. That's a sensible decision, as you'll have no need to open this program once it's installed. However, to tweak settings or see your drive's current optimization quickly, check this box so you can open Diskeeper easily, later.

Up & Running

Provided you don't uncheck the auto-defrag option during setup, Diskeeper can get to work right away without you touching a thing. It begins reorganizing file fragments everywhere—internal, external, and virtual drives, plus their partitions and volumes (drive divisions)—immediately, and its IntelliWrite feature stops additional fragments from occurring as you work. (IntelliWrite requires at least 2GB of free space on the drive.) If you prefer to open the program and see what it entails, you can perform drive analyses resembling those of other defrag programs, or you can change the settings for various drives. (To tweak any of these options, right-click the drive and select the option.)

For example, you can disable automatic drive defragging for a particular drive or set it to turn on and off at a particular time. We didn't experience any slowdowns or problems during background, automatic defragging. Nevertheless, if you perform processor-intensive functions or worry about having your files moved around while you are working, you could set Diskeeper to auto-defrag only at night or on the weekends when no one is using the PC.

By default, Diskeeper does not enable boot-time defrag, an operation that defragments system files Diskeeper cannot safely move during regular operation. It's a good idea to run boot-time defrag periodically on your system (for example, on the C: drive), but it slows that startup significantly. Do it when you go to lunch or early in the morning when you won't need the PC for a half-hour or so.

It's A Keeper

Overall, we were very pleased with Diskeeper and the effortless way in which it dispatches defragmentation. Tinkerers can also run defrag operations manually—although Diskeeper says its automatic process is more thorough—and the program's numerous editions provide something for everyone.

The Pro version ($59.95) includes I-FAAST, which speeds file access by intelligently sequencing files as it defragments. The Home Server edition ($59.95) supports home networks running Windows Home Server. Diskeeper 2010 Pro Premier ($99.95) provides special technology for optimal defragging of very large drives.

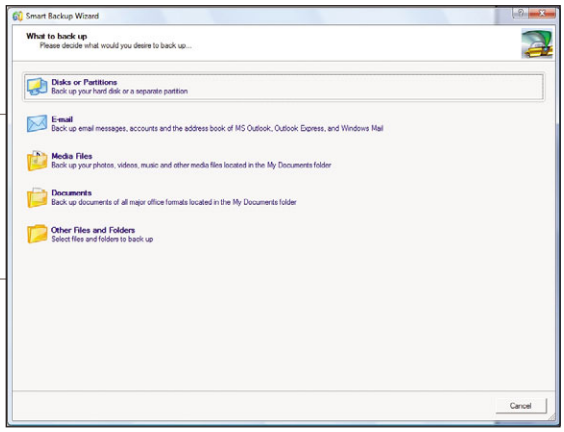
BY JENNIFER FARWELL

Powerful Recovery Tools

Paragon Backup & Recovery 10 Suite

$69.95 | Paragon Software Group
(888) 347-5462 | www.paragon-software.com

Windows 2000 WinXP Vista Win7



Paragon Backup & Recovery 10's backup and restore features work well enough, but the company promotes this as a "disaster recovery" suite, and in this area, it really shines.

Paragon's Smart Backup Wizard makes backing up an entire drive or partition, email-related files, and "office-style" (such as document or spreadsheet) or multimedia files (such as music, photos, and video) stored in the My Documents folder a fairly automated process. Click a button, assign a name and location to your backup set, choose a schedule, and go. Paragon does the rest.

If you need more control, Paragon lets you select which folders and files to back up, with checkboxes to include and/or exclude a wide array of file types—even file categories (such as multimedia). When it's time to restore, Paragon automatically finds backup archives and lets you restore entire archives or just the files you need.

Key Features: Standard backup and restore features are augmented by powerful recovery and drive access tools.

However, Paragon's backup and restore features are hardly groundbreaking. Rather, Paragon's recovery tools and options are the real standouts. With them, you can burn a rescue disc, transfer files from any supported file system, and even attach a drive from another PC—with Paragon adjusting the OS's hardware settings so you can boot it from your machine. These features make disaster recovery—something everyone should think about—much less painful.

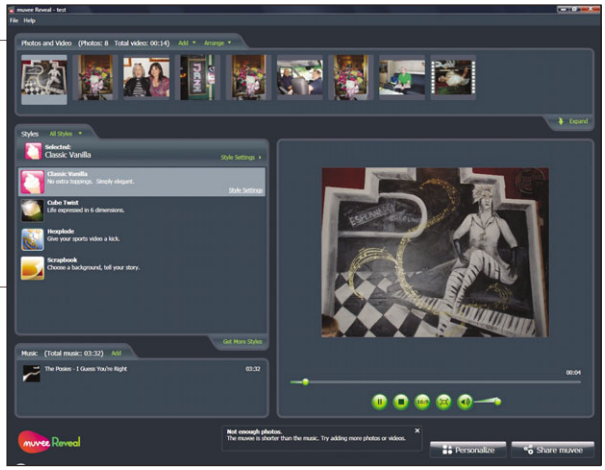
BY JENNIFER FARWELL

Homemade Movies

muvee Reveal 8

$79.95 | muvee
contact@muvee.com | www.muvee.com

WinXP Vista Win7



For the average user, many video-editing programs can seem mighty complex, making the creation of even basic "home movies" a confusing chore. muvee Reveal attempts to demystify video editing.

The interface is pleasantly uncluttered, with only four panes—one to preview photos and video clips you add, one to select your theme, one to add sounds, and one to preview your movie. After you insert your elements and choose a theme, you can click the Play button to preview your movie. During preview playback, muvee will warn you if the clips and images you have added are too short for the music you selected.

Key Features: This authoring tool simplifies the process of packaging photos and video clips with music and themes to create and share home movies.

Drop-down menus on each preview frame let you rotate images, change durations, split clips into sections, and more. One especially nifty feature for video clips is Magic Moments, which lets you select the best frames from a clip for inclusion. muvee also includes some basic transitions and other goodies.

BY JENNIFER FARWELL

Compiled by Joseph Moran

Microsoft News

Office 2010 Set To Launch; Upgrade Program Established

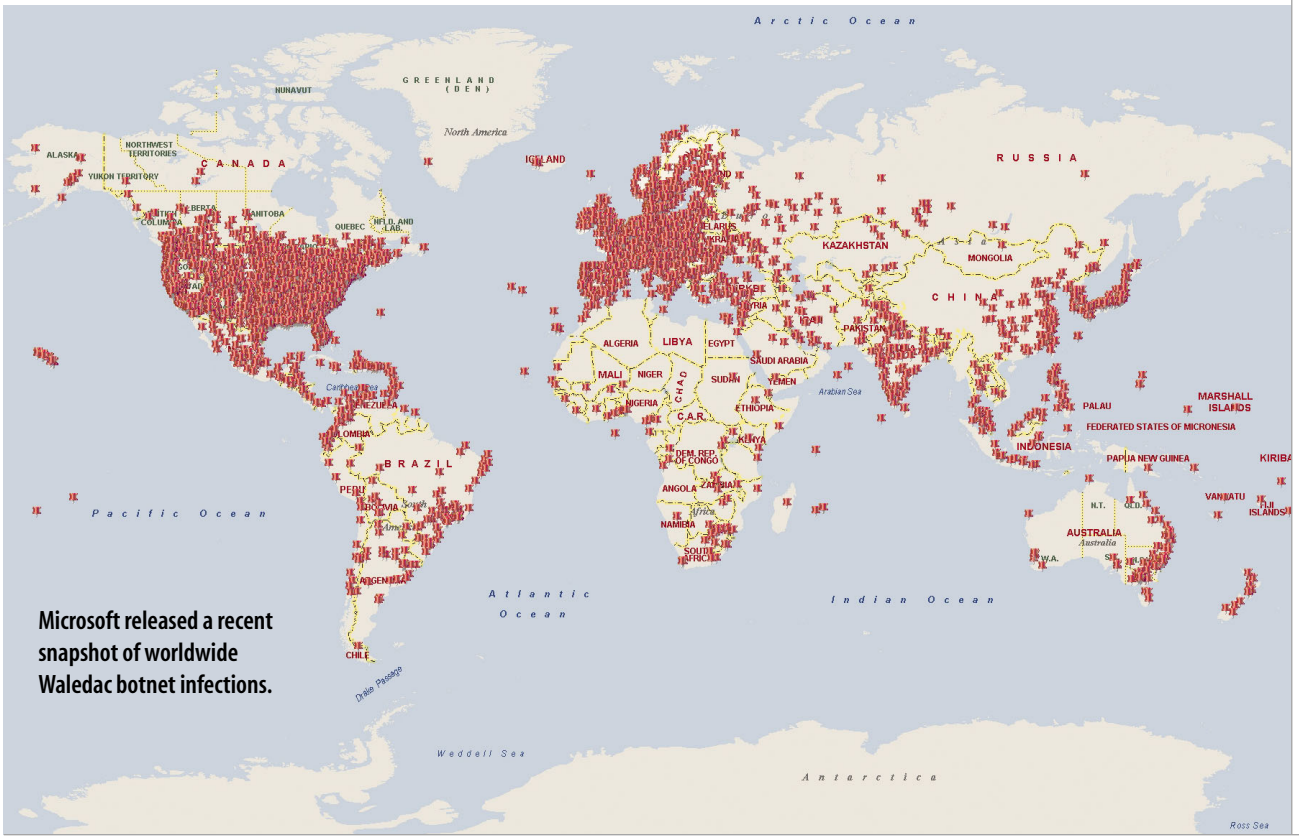
Microsoft reports that the consumer versions of Office 2010 will be available for retail and online purchase by June. The company has also announced that customers who buy Office 2007 (or a PC that includes it) between March 5, 2010, and Sept. 30, 2010, may be eligible to receive a free upgrade to a comparable version of Office 2010. The upgrade will be provided as a download, though discs are also available for a fee. Program details are available at tinyurl.com/y87kve2.

Microsoft Takes Aim At Waledac Botnet

Microsoft has thrown a monkey wrench into the operations of the Waledac botnet, which (according to Microsoft) had the capacity to generate 1.5 billion spam emails daily and was responsible for about 651 million spam messages aimed at Hotmail accounts alone in an 18-day period last December.

Botnets are networks of infected computers (typically unbeknownst to the owner) that are centrally controlled for the purpose of distributing spam and malware and launching Internet attacks. Waledac was one of the 10 largest botnets in the United States, estimated to comprise hundreds of thousands of computers worldwide.

As a result of Microsoft's effort, which was internally dubbed Operation b49, a restraining order shut down 277 Internet domains—without notice—that were believed to be associated with Waledac, which severed the link between the botnets' control centers and most of the infected systems. Microsoft says it is also taking technical steps to block the ability of the infected systems to communicate with each other.



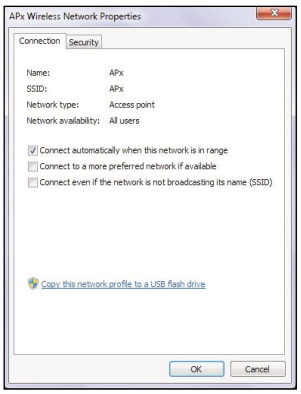
Microsoft released a recent snapshot of worldwide Waledac botnet infections.

Windows Tips

Configure Wireless PCs Quickly With A USB Flash Drive (Windows Vista/7)

To have the most secure Wi-Fi network possible, it's important to use a long security passphrase made up of random characters. But because typing a long and complicated passphrase can be error-prone and time-consuming—especially when you have to do it on multiple computers—most people choose a short word that's easy to remember, and, often, just as easy to guess.

But with Windows 7 and Vista, you can configure a USB flash drive that will automatically copy your Wi-Fi network's configuration settings to other Windows computers (including WinXP systems). This will give you the protection of a long passphrase with minimal hassle because you'll only have to type it twice—into the wireless router and again on a single PC (though you'll still need to enter it manually on any non-Windows computers or devices).



By copying your Wi-Fi network settings to a USB flash drive, you can easily transfer the settings to another Windows PC.

To configure a USB drive, insert one into the system that's already set up for wireless access and search for and open Manage Wireless Networks from the Win7 Start menu. (In Vista, you'll find Manage Wireless Networks in the Network And Sharing Center, which you can open by right-clicking the Network icon in the Windows Notification Area.)

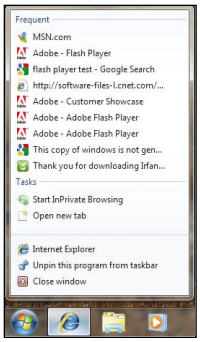
Next, right-click your wireless network in the list provided (make sure you choose your network), choose Properties, and then click Copy This Network Profile To A USB Flash Drive. Run the short wizard, and your Wi-Fi network name and security passphrase will be copied to the drive. Then, plug the drive into another PC, select Wireless Network Setup Wizard from the AutoPlay (USB Flash Drive in WinXP) menu, and click Yes when asked if you want to add the computer to your wireless network.

Though you can store other data on a flash drive that's set up for Wi-Fi configuration, it's best to put the drive in a safe place because it's the key to your wireless network. If you do need to use the drive for something else, delete the SMRTNTKY folder as well as the Autorun and SetupSNK files before doing so.

Save Clicks With Handy Windows 7 Taskbar Hotkeys

One of the lesser-known features of the Win7 Taskbar is the slew of new keyboard shortcuts that help you quickly open programs and switch between running ones.

For example, holding down WIN (the Windows logo key) while pressing a number will open the corresponding Taskbar window. (So WIN-3 opens Windows Media Player, assuming it's in the default position.) Adding ALT to the WIN-number key combination will open a program's Jump List (whether the program is running or not). And SHIFT plus the combo on a program that's already running will open a new copy of the program.



Windows News

Windows 7 Gets Antipiracy Update

Microsoft has released a Windows Activation Technologies Update for Windows 7 that the company says is designed to warn and protect customers who may be running a counterfeit or pirated copy of the operating system (which may contain viruses or other malware).

The update, which is categorized as "Important" but is not a required download (and can be uninstalled if desired), determines whether or not Win7 is genuine and properly licensed by scanning for known methods of tampering with and disabling the operating system's activation process.

Microsoft says the update will periodically contact the company's servers to update itself, but does not collect personally identifiable info.

Support Ends For Windows XP SP2, Vista

If you still have a Windows XP system running SP2 (Service Pack 2), consider upgrading it to SP3 (Service Pack 3) ASAP. Microsoft will end support for WinXP SP2 on July 13, 2010, and after that date, WinXP SP2 systems will no longer be able to receive downloads—including security patches and device drivers—via Windows Update.

To remain eligible for updates, users should update WinXP SP2 systems to SP3 via Windows Update before the cutoff date, or visit tinyurl.com/yb5dj8u for a link to download the service pack manually.

April 13, 2010, marked the end of support for Windows Vista's original release (prior to service packs). At support.microsoft.com/kb/935791, you'll find links to Vista SP2 as well as SP1, which must be installed first.

Windows XP

Add & Remove Windows Features

Let's blame it on digital cameras, shall we? They make it so easy to snap a pic, and then a follow-up pic, and then a follow-up to the follow-up . . . all at maximum image quality and file size, of course. Yes, digital cameras are definitely a prime reason why our laptop hard drives always seem to be running out of space.

Then there are the video clips, the music files, and the gargantuan software suites we can't live without. Desktop users can install a second or even a third drive to get more capacity, but notebook owners have to endure the hassle of migrating their data to (and installing) a replacement drive.

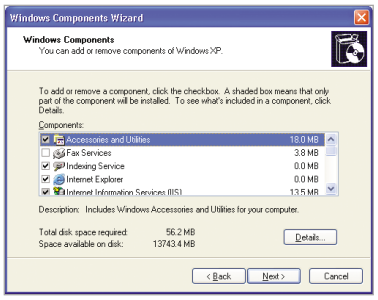
Moreover, laptop drives top out at half the capacity of hard drives sized for desktop PCs. Sometimes, depending on the amount of time, money, and skill you have, it's better to simply pare down the data on your laptop hard drive to make more room. That means archiving media files you seldom access, running Disk Cleanup, and uninstalling applications you rarely use. It also can mean eighty-sixing Windows features you never use.

As far as desktop computers are concerned, maybe we can ironically assign some of the blame for data congestion to the drives themselves. Hard drives are incredibly inexpensive these days for the capacity you get. At this writing, we found 1.5TB (terabyte) desktop drives for less than $90 including shipping. With storage space so cheaply abundant and room inside most tower cases for additional drives, many of us have fallen out of the habit of trimming the fat, so to speak. If there is superfluous data, such as Windows components we know we will never use, we often just let them be.

SSDs (solid-state drives) have changed that paradigm, at least for some forward-looking upgraders. These ever-evolving flash storage drives can radically speed up many of your PC's operations, especially when they're used with newer OSes (operating systems) such as Windows 7. From bootup to media encoding to launching multiple applications at once, one of the better SSD models can turbocharge your computer in a way that even the best hard drive never could.

On the downside, SSDs are still quite expensive per gigabyte. That's why users on a budget are starting to buy 30 to 40GB SSDs to use only as boot drives. That is, they spend $90 to $165 on a small C: drive that is large enough for a Windows installation, and then they maintain a separate, secondary hard drive with a drive letter such as E: for their applications and personal data.

Because the OS spends a good deal of its time reading and writing small files, it's the best software to put on an SSD with limited space. The day will come when SSDs with hundreds or thousands of gigabytes will become affordable, so that you can have a fast, completely solid-state PC with enough capacity for everything. At the present time, of course, you could easily damage your retirement account trying to buy this much flash.



The Add/Remove Windows Components utility is accessible through Add Or Remove Programs in the Control Panel.

Should you want to install a few key applications on your small SSD boot drive alongside WinXP, such as your antivirus software and graphics card control software, every megabyte will count when it comes to trimming unused features from your OS. The days of browsing system folders looking for individual files to delete are long gone.

Instead, it's more productive to safely get rid of Windows components you don't need—"safely" being the key word. To do this in a reversible way that's approved by Microsoft, you need to use a utility in Windows itself. In WinXP, it's called Add/Remove Windows Components.

Yea Or Nay

By default, WinXP installs plenty of items you may never use, such as MSN Explorer, Windows Messenger, and

As far as desktop computers are concerned, maybe we can ironically assign some of the blame for data congestion to the drives themselves.

Freecell. Along the same lines, there might be a feature or two that didn't make it into the original installation but sound like features you would like to have onboard. Some examples on our test PC are File Transfer Protocol Service, Fax Services, and UPnP (Universal Plug and Play) User Interface.

To get started, click Start, Control Panel, and Add Or Remove Programs. Along the left edge, click the Add/Remove Windows Components icon.

Here, you'll see a scrolling menu of OS features with checkboxes. Click a component to highlight it, and WinXP will display a short Description of it under the list.

If the Details button appears when you select a Windows component, it means that it's a category with one or more subitems within it. Click Details or double-click the item to see its subcomponents and/or subcategories in a new window.

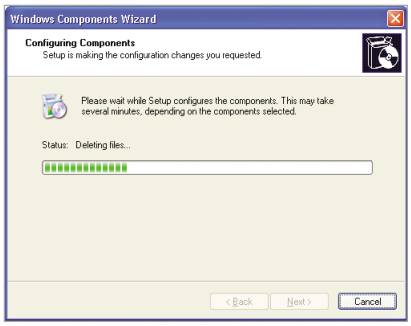
A white checkbox with a check in it means that a component or category is installed on your PC as a part of WinXP. A box without a check mark indicates a feature that isn't currently installed on your system. And a category that has a gray checkbox with a check mark in it tells you that some of its subitems are installed but others are not (or you've just selected them to be uninstalled).

You can mark items for installation/uninstallation by clicking their checkboxes. If you've decided to add one or more features, be aware that Add/Remove Windows Components may ask you for your Windows installation CD or the location of the relevant files, such as on your hard drive's recovery partition.

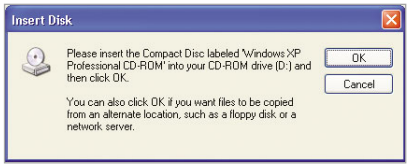
Be sure that you know what a particular feature is should you choose to get rid of it. Try to look up any unfamiliar items before you tap them for removal. Also note that Add/Remove Windows Components can't really remove a couple of items, such as Outlook Express and Internet Explorer. All it will do is delete these apps' shortcuts from the Start menu and Desktop.

When you're ready to apply the changes you've made, click Next. If the wizard asks you for your WinXP CD, insert it in your optical drive and click OK. If you don't have an installation disc, click OK and then click Browse to try to locate the relevant installation file(s) on your computer's recovery partition or media. Should the WinXP disc menu appear, click its Exit icon to close it. Finally, click Finish.

The next step is to run Windows Update in case there are any patches available for the component(s) you just installed. In the Add Or Remove Programs panel, click the Add New Programs button and Windows Update. (You can also reach Windows Update by clicking Start, All Programs, and Windows Update. A third method is to launch Windows Explorer and then click Tools and Windows Update.) Click Custom and then follow the directions to install any High Priority or appropriate Software, Optional updates. Lastly, close Add Or Remove Programs and the Control Panel.



As Add/Remove Windows Components applies the changes you've specified, you'll see this progress dialog box.



If you're adding a feature, Add/Remove Windows Components may ask you for your WinXP CD. Click OK if you don't have a disc, but you do want to point the utility to another file location, such as a recovery partition.

Down The Road

Later, if you find that WinXP can't do something it used to do, you might have deleted a Windows component you didn't know you needed. Return to Add/Remove Windows Components, recheck the component's box, and finish the wizard. If you can't determine just which item you need to reinstall, it might be simpler to roll your computer back to an earlier state using System Restore (click Start, All Programs, Accessories, System Tools, and System Restore). ■

BY MARTY SEMS

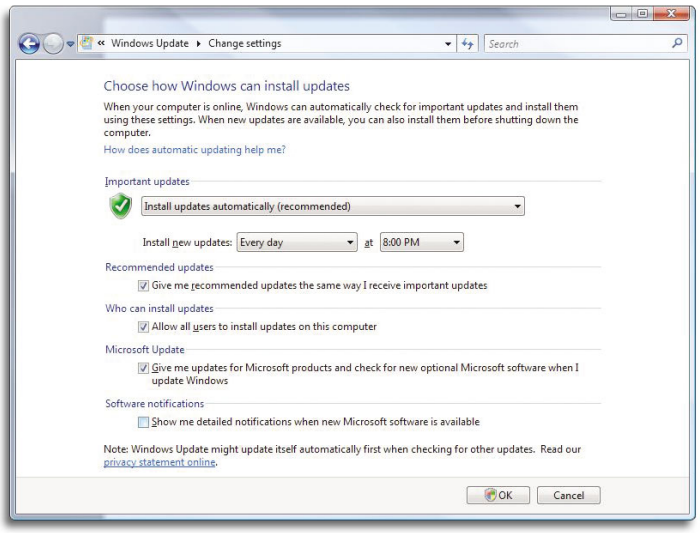
Windows Vista

Manage Windows Update

Windows Update is one of those "boring" OS (operating system) features that (mostly) just sits in the background and performs its function. It doesn't really disturb you unless it has a problem or needs to kick off a reboot. If you left Windows Update to run automatically at installation, you probably haven't thought about it much since. And you're not alone. Setting Windows Update to work without your involvement is smart—much smarter than turning off automatic updating and relying on memory to get security updates and system patches. But if you're not thinking about Windows Update occasionally, you're also missing out on some extra functionality Microsoft built into Windows Vista.

Get Acquainted

The Windows Update service has been around awhile. First introduced as a Web site linked from Windows 98's Start menu, Windows Update has evolved alongside the OS ever since. Microsoft started making updates available for automatic download and installation with Windows XP and the advent of near-universal Internet connectivity. Since then, the service continues to improve and expand, both within existing OS versions and with new Windows versions. Today, Windows Update provides a host of security updates, software patches, new device drivers, and upgrades to Windows features. It's even the primary delivery mechanism for entire service packs and new browsers: Vista SP2 (Service Pack 2) and Internet Explorer 8 were both made available via Windows Update.



Configuring the settings for automatic updates can provide extra functionality and flexibility.

For most of its life, however, Windows Update was one of those features that few people knew about and even fewer used regularly. Most people's introduction to Windows Update comes via the periodic alert boxes containing notification that Windows has installed new updates and needs to restart the computer. Often popping up at just the wrong time, they can be annoying. However, they're only one part of what Windows Update can do. To see more, access Vista's Windows Update from the Control Panel under the System And Maintenance category, or from the All Programs list found in the Start menu. As a shortcut, you can also just type Windows Update into the Start menu's Search box. There are several important parts to the Windows Update dialog box; we'll show you around and then dig into some of the more important features.

The top section of the main screen provides the most important information right up front: a list of available updates. In descending order of urgency, the three categories are Important Updates, Recommended Updates, and Optional Updates. Important Updates are what used to be called Critical Updates, and they include security-related patches as well as ongoing changes to fundamental components of the OS.

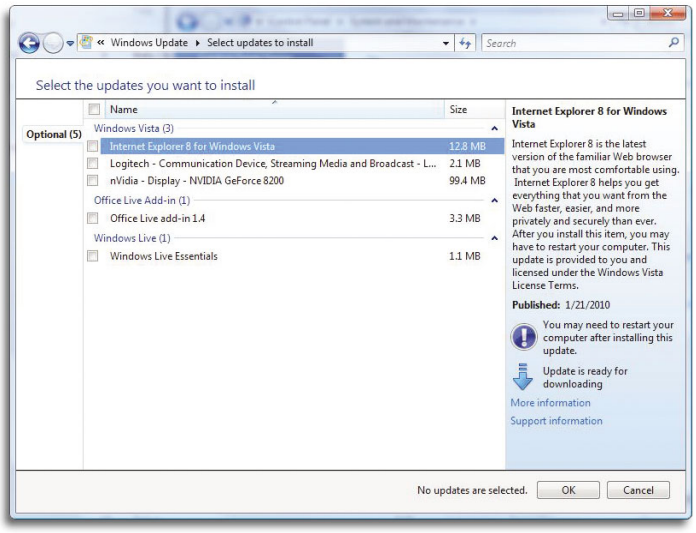
Recommended Updates include hardware and software compatibility improvements and updates to noncore Windows components (such as Media Center or Mail's junk email filter), plus driver updates for key components (such as keyboards) and bug fixes that are limited in scope or severity. We'll discuss Optional updates in more detail later, but they basically include minor updates or noncore add-ons.

The main screen also lists the most recent check for updates, which helps you confirm that Windows Update is

scheduled and able to connect and tells you when new updates were last installed (along with a link to view that history). Along the left menu, you can select Check For Updates, Change Settings, View Update History, Restore Hidden Updates, or browse the Windows Update Frequently Asked Questions.

Configure Automatic Updates

Automatic updates are the bread and butter for Windows Update. They're turned on by default during Vista installation (for Important and Recommended Updates), along with automatic installation of anything downloaded. The default settings aren't immutable, however. Click the Change Settings link on the left menu in the Windows Update window to review your options. You may already know that you can dial back the automatic settings, putting more of the responsibility in your own hands for downloading and installing updates; though, we don't recommend doing so. Forcing the system to wait for you to review critical changes or to go looking for them is a formula for delay.



Windows Update leaves the installation of Optional Updates to your discretion.

More usefully, you can control the timing of automatic updates. Windows is set by default to check each day at 3 a.m., but that may not be optimal for everyone. Remember that Windows Update can't run if your computer is turned off, so the best setting is a time when your computer is usually on but not in the middle of heavy use. That timing differs a little according to everyone's individual schedules; you may find that an evening or midday update works better. If you want, you can set a weekly (instead of a daily) schedule, but we don't recommend intentionally creating delays in receiving important system changes.

If you're uncomfortable ceding control over Recommended Updates, you can also opt to have only Important Updates automatically downloaded and installed, leaving the merely Recommended Updates to your own discretion. To do so, simply uncheck the option to Give Me Recommended Updates The Same Way I Receive Important Updates.

On the other hand, Microsoft also provides a few additional tools that can help extend the flexibility and power of Windows Update. If you don't normally work in an account that has admin privileges (and you shouldn't), or if other people might be using the machine during scheduled updates, check the box to Allow All Users To Install Updates On This Computer. That way you can review and install Optional or Recommended Updates from whatever account you're using.

The Microsoft Update feature expands the scope of Windows Update into other Microsoft products (including Office and Microsoft Live), rolling in security and functionality patches for those products, as well. Finally, you can opt to receive Software Notifications from Microsoft that let you know when new programs are available for download and installation.

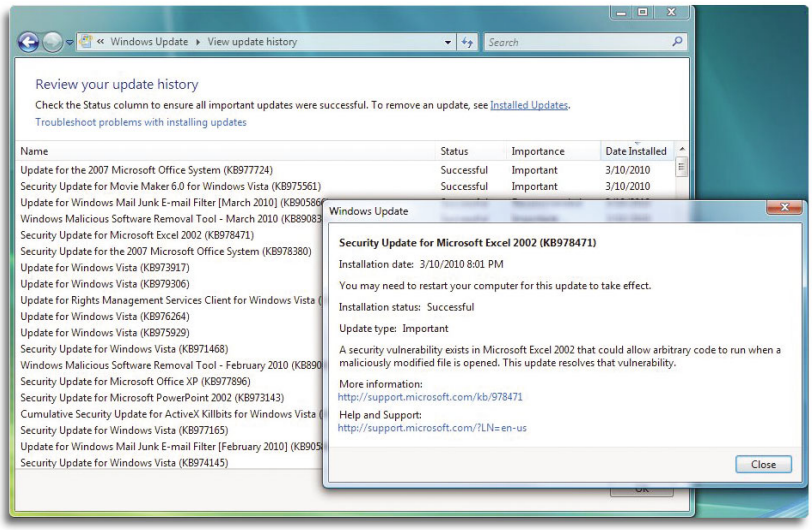
Manual Updates

Although automatic updating is the best way to operate for Important and Recommended Updates, there are still some important features of Windows Update that need direct participation. First among these is reviewing and selecting Optional Updates. Microsoft lumps a lot of things into this category. You'll see language packs and minor driver updates, plus upgrades to nonessential Windows components such as Windows Live. You'll also occasionally see major updates that aren't required for Windows to function and that Microsoft doesn't want to automatically install for everyone. Internet Explorer 8 for Vista falls under this category. You can download and install the new browser from Windows Update, but only if you're paying attention to Optional Updates. When you launch Windows Update, the main screen will display separate counts of both Important and Optional Updates, if any. To install Optional Updates, click the appropriate link and review the list. Check the box next to any you wish to include and then click OK. The information pane to the right of the list will provide more details about each update as well as information about whether it will require a system reboot.

As you're reviewing Optional Updates, you'll probably see a few that you know you'll never need. Language packs and updates to components you don't use often fall into this category. Rather than having to sift through these each time you're checking for new updates, you can hide any you don't want. Simply right-click the item in question and select Hide Update from the Context menu.

You won't see it listed anymore until you select Restore Hidden Updates from the left pane of the Windows Update main screen. That tool will display a list of all the updates you hid in the past, providing the ability to select and restore individual options to the list again. If you have multiple users sharing a machine, this feature also lets you review the choices other people have made, which may or may not coincide with the Optional Updates you want to dismiss.

Beyond just managing Optional Updates, Windows Update also provides a full history as well as the ability to uninstall or roll back most of those updates. Back at the Windows Update main screen, select the View Update History link on the left. The resulting list provides details on the status (Successful or Failed), Importance, and Date Installed for each Windows Update item. You can sort by any of these categories or review in-depth information about each by right-clicking its row and selecting View Details. The details are especially helpful in that they also provide links to relevant Microsoft information and support Web sites for the issues addressed in a particular update.



Reviewing Windows Update's history can help troubleshoot system problems and ensure that you're receiving security patches and other important updates.

Removing installed updates isn't quite as obvious. At the top of the Update History window, you'll see a sentence directing you to a separately linked Installed Updates list. Click that link to view a differently formatted list of installed updates. You can again sort the list by Name or by Installed On date as well as by Program affected or Publisher. If you're confident that a particular update has created problems on your system, you can right-click its entry and select Uninstall. Windows will ask if you're sure and then proceed if you click Yes. Removing minor drivers or updates to noncore Windows components as part of a troubleshooting process is relatively low-risk. However, you shouldn't uninstall any security updates or major component upgrades unless you're absolutely certain that they've caused a problem and you've eliminated other possible solutions (including a check for subsequent updates repairing the previous ones).

The fact is that Windows will update itself with important security patches and critical component upgrades. But don't let that obscure the other benefits that Windows Update offers. From expanding the scope of automatic updates to reviewing and troubleshooting update history, Microsoft Vista's Windows Update represents a continued evolution of this classic and powerful tool. ■

BY GREGORY ANDERSON

Ultimate Extras

Microsoft extends Windows Update even further for users with the Windows Vista Ultimate edition. Additional tools and features, called Ultimate Extras, appear beneath Optional Updates. They are available for manual download and installation for anyone running Vista Ultimate. Here is a list of notable Ultimate Extras.

Hold 'Em is a free Windows poker game available only via Ultimate Extras. More fun than the familiar Solitaire, Hold 'Em lets you play against multiple computer-driven characters.

Microsoft Tinker takes Windows' puzzle-solving games to a whole new level. Lead your robot character through 60 levels of mazes and obstacles.

BitLocker Drive Encryption enhances your system's security. You can encrypt entire drives, protecting your data from loss or theft. (This option is disabled if your computer doesn't have the appropriate hardware.)

Windows DreamScene brings full HD (high-definition) video and animation to the Desktop. Set one of the included videos or one of your own as your Windows Desktop background.

Windows Sounds Schemes augments Windows' default schemes with fun new options. Choose from Glass Sounds instrumentals, Pearl Sounds percussion, or a Tinker soundtrack scheme. ■

Windows 7
Tablet PC Tools

Just as email diverted some (but not all) correspondence from the U.S. Postal Service, the keyboard has put a dent, rather than a stake, in the art of writing by hand. When it comes to speed (and, for some people, comfort), a keyboard puts the pen to shame, but the keyboard can't beat a pen and paper when you want to quickly jot notes in the margins, sketch illustrations, or just doodle.

Enter the Tablet PC, which is one of the more popular technologies to bridge the gap between handwriting and the computer. Tablet PCs let you write notes (with a pen-shaped stylus) directly onto the screen. They save those notes as digital documents that you can edit and share, much like typical document files.

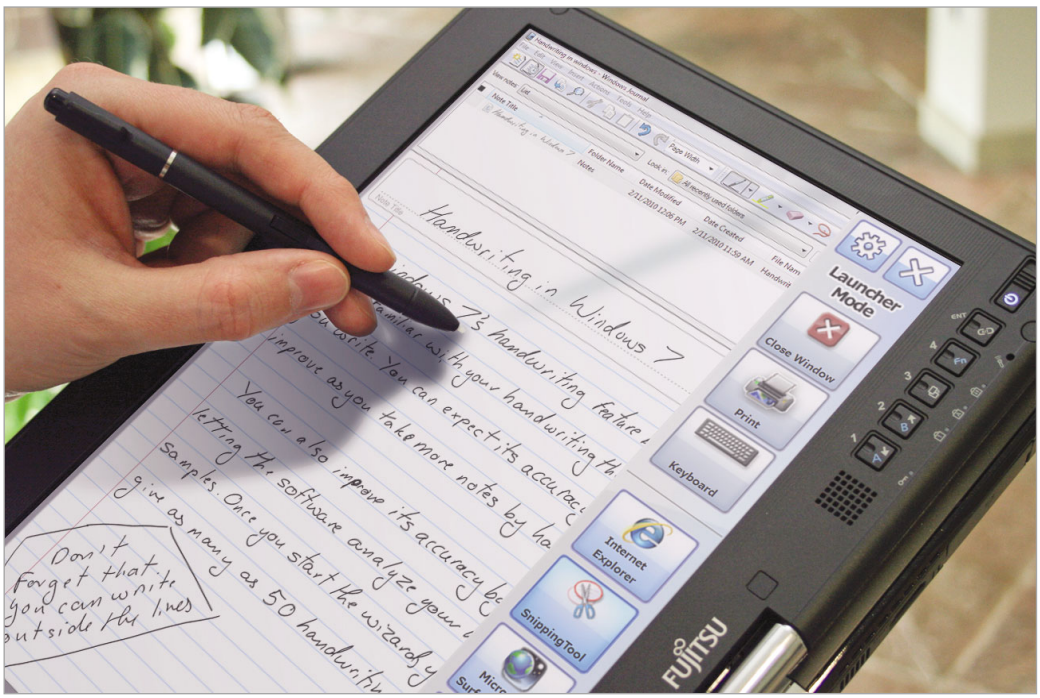
You can use the Tablet PC stylus to "click" icons and navigate Windows in the same way that you would with a mouse. Some new Tablet PCs also let you manage Windows by touching the screen with your fingers. Many Tablet PCs have a rotating screen and keyboard, so you can use the device as a notebook when you prefer not to write by hand.

Windows 7 has several features for Tablet PCs. We'll highlight the most important features and show you how to configure them.

Technology Meets The Pen

The tablet pen looks much like an ordinary pen, but it has a hard, ink-less tip and typically sports a button that you can press to erase mistakes. To write, you gently press the tip of the tablet pen to the screen and then write as you would with a normal pen. Some programs save your text just the way you write it. Others, such as Microsoft Word, use a small input window (known as the Tablet PC Input Panel) to capture your handwriting before translating it to the program's default font.

Thanks to Win7's Calibrate and Handwriting Personalization tools, you have control over the Tablet PC's ability to accurately display and translate your handwriting. You can find both tools in the Control Panel. Click the



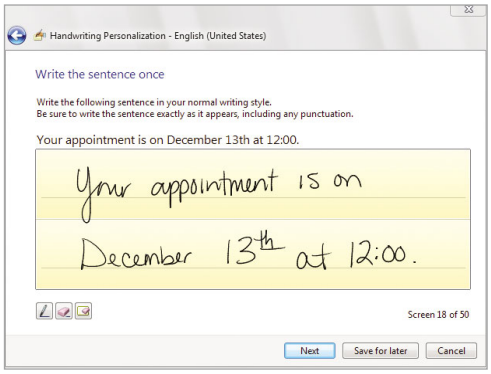
Tablet PCs let you write notes and sketch images by hand. This Fujitsu LifeBook T4310 Tablet PC (from $1,149; store.shopfujitsu.com) has a touch-enabled screen that rotates and folds over the keyboard to create the tablet shape.

Start button, click Control Panel, and then click Hardware And Sound.

Calibration wizard. Calibrating ensures that the location your tablet pen touches and the location that the computer thinks your pen is touching are one and the same.

Under Tablet PC Settings in the Hardware And Sound portion of the Control Panel, click the Calibrate The Screen For Pen Or Touch Input link. When the Tablet PC Settings window appears, click the Calibrate button. If another window asks which input you'd like to calibrate, click Pen Input. Click Yes if the User Account Control window appears. At this point, calibration starts. Simply tap the crosshairs each time they appear to complete the process.

Handwriting Personalization wizard. Win7 automatically stores data about your handwriting to help it recognize your pen strokes, but you can hasten the process by providing writing samples. In Hardware And Sound, find the Pen And Touch section and then click Change Settings For Handwriting Personalization.



The Handwriting Personalization tool teaches Windows 7 to better recognize your handwriting. You can reset (and retrain) this feature anytime, which is handy when someone else wants to use the tablet extensively.

When the Pen And Touch window appears (with the Handwriting tab selected), click the Learn About Handwriting Personalization link and then click Tap To Open Handwriting Personalization. (A faster way to do this is to click Start, enter **handwriting**, and then click Handwriting Personalization.)

Click Teach The Recognizer Your Handwriting Style, click Sentences, and then click the Next button. Now, you're ready to write. Using your normal handwriting style, write the words that appear in the wizard in the space provided. You can write up to 50 samples, but you don't need to write them all at once. Click the Save For Later button when you want a break.

Running the Calibration and Handwriting Personalization wizards is a great way to improve the Tablet PC's accuracy, but neither wizard is critical; you (and anyone who borrows your computer) can write with the tablet pen as soon as it's powered on.

High-Tech Note Taking

When you write text for most programs, you write in the Tablet PC Input Panel. That application translates your handwriting for the program you're using. However, Win7 has a similar tool for math and a couple applications that accept your handwriting without any translation.

Math Input Panel. Writing numbers is a snap with the Math Input Panel. As you write, the tool analyzes the numbers and symbols you're using and displays the equation in a standard font (not your handwriting). To use it, click Start and then enter **math** in the Search field.

Sticky Notes. Use Sticky Notes when you need to jot down a short note but don't want to open a document. The application displays your writing (or drawing) exactly as you pen it. If you often write reminders for yourself, you'll love this program.

To start Sticky Notes, click Start and then enter **sticky** in the Search field. Next, click Sticky Notes under Programs. You can open multiple Sticky Notes and even color-code them. (Tap and hold the tablet pen on a note to see a list of note colors.)

Windows Journal. As soon as you open Windows Journal, you'll recognize the white lined notepaper from school. As you could with a traditional paper and pen, you can write in the lines (and the margins) and draw images. To start Windows Journal, click Start, enter **journal** in the Search field, and then select it in the Programs list.

Unlike programs that use the Tablet PC Input Panel, your text shows up as you write it, which means that you're on your own if you sometimes have trouble reading your own handwriting. Of course, you'll probably want to convert your handwritten notes to text sometimes. Windows Journal can do this with minimal fuss.

Start by clicking the Selection Tool icon at the top of the window and then drawing a circle around the text you'd like to convert. Next, click Convert Handwriting To Text. When the Text Correction window appears, you can fix any words that the software didn't recognize (if there are any). When you click OK, you can choose to put the converted text right on the notepad or copy it to the Clipboard so you can paste it in another program.

Although these handwriting programs aren't critical to the Tablet PC (you can use the tablet pen to write in other document programs and even navigate the operating system), they're great for people who want to keep their handwriting intact.

Touch The Screen

Some Win7-based Tablet PCs support touch input. If your Tablet PC is touch-enabled, you can use your fingers instead of a tablet pen in many cases. For example, you can

Many touch-enabled Tablet PCs are capable of running the Microsoft Surface Touch Pack. Surface programs let you manipulate items by touching the screen with your fingers. Here, we're resizing an image by pulling a finger toward a thumb in Surface Collage.

tap the screen to click, double-tap to double-click, and press and hold to right-click. You can also use gestures, too. Spreading your thumb and forefinger zooms in, while pulling them together zooms out.

In our experience, navigating Win7 menus with our fingers is almost as easy as using the tablet pen. However, the OS (operating system) has a tool that helps people who run into trouble when navigating by touch: the Touch Pointer. Using your mouse or the tablet pen, click Start, Control Panel, and Hardware And Sound. Under Pen And Touch, click Change Touch Input Settings. Finally, check the box in the Touch Pointer section and click OK. Now, you'll see an image of a mouse, with a nearby mouse pointer. You can use your finger to move the mouse (and its pointer). To click or right-click, touch the left or right mouse button on the Touch Pointer.

Go Below The Surface

If you're a fan of science fiction movies (particularly the ones in which characters move pictures and documents across screens with their hands), you're going to love the Microsoft Surface Touch Pack, which is an application suite that comes with some Win7-based Tablet PCs. To open any of the Surface Touch Pack applications, click Start, All Programs, and Microsoft Touch Pack For Windows 7.

One of the suite's applications, Microsoft Surface Globe, lets you spin and zoom in on a virtual globe with your fingers. While the Tablet PC is connected to the Internet, you can zoom in on specific locations to the point that you see houses and streets from a bird's-eye view. You (and anyone else viewing the map with you) can move the map easily with the flick of a finger.

The Touch Pack also includes Microsoft Surface Collage, which lets you pull photos from your My Pictures folder onto a virtual collage surface (you can choose from corkboard, cloth, and other surfaces) and move, rotate, and resize them with your fingers. You can save collages and even set your favorite as the Desktop background.

None of the Surface programs is productivity-driven, but they do a great job of illustrating what's possible with touch input technology.

What's Next For Tablets

Despite the flexibility that Tablet PCs offer, they haven't caught on with typical computer users to the extent that many industry experts initially predicted they would. Tablet PCs easily won over the hearts of many business users who needed to digitize their notes, however. Win7 will likely have a positive impact on mainstream Tablet PC adoption, as should Apple's iPad, announced in late January. If you're thinking about trying one out, give it a shot. There hasn't been a better time to buy a Tablet PC. ▌▌

BY JOSHUA GULICK

Tablet Buttons

As convenient as it is to tap and touch a Tablet PC's screen, you'll find that the Tablet Buttons, near the edge of the screen, are also handy. Windows 7 Tablet Buttons typically include an ENTER key and a button that lets you quickly change the screen's orientation.

Each button supports two commands. If you press the button, you'll trigger the primary command (such as ENTER). If you press and hold the button, you'll trigger the button's other command.

Your Tablet PC may not have any secondary commands associated with the buttons by default, but you can easily configure them to open your favorite programs, toggle Mute, or play media files. Click the Start button and then click Control Panel. When the Control Panel opens, click Hardware And Sound and then click Tablet PC Settings. Next, click the Buttons tab.

This window displays a list of Tablet Buttons. Select the button you'd like to configure and then click the Change button. Click the drop-down menu next to Press And Hold and then choose the command that you'd like the button to trigger from the menu. Click the OK button, and your Tablet Button is ready to go. ▌

Create Disc Labels

A permanent, felt-tipped marker is probably the most common CD/DVD/BD (Blu-ray Disc) labeling tool used today. You burn a disc, you mark its contents before you forget what they are, and you merrily continue with your day.

Sometimes, however, the contents of an optical disc are a little too special to be hastily scrawled with a marker. A professional-looking business presentation requires an equally professional-looking CD label. A DVD of a wedding or a child's first birthday party similarly deserves better treatment than a scribble with a Sharpie.

There are three better ways to label your optical media at consumer-friendly prices. Each has benefits and drawbacks, and each requires that you purchase an item or two such as labels, compatible hardware, and/or special media. Read on to learn about two full-color labeling methods, or hop to the "LightScribe" sidebar for info on a snazzy-looking, two-tone option.

Printable Discs

The first labeling method we'll discuss is arguably the fastest and easiest, too. With printable CD/DVD/BDs and a compatible inkjet printer, you can make permanent color or black-and-white labels with any combination of text, graphics, and/or digital photos. For the most smearproof results, buy discs recommended by the manufacturer of your printer.

A compatible inkjet printer comes with a dedicated tray to hold your disc. Most printable media comes with a white surface on the label side of each disc. At press time, inkjet-printable discs cost about two-thirds more to twice as much as regular CDs/DVDs, but printable BD-Rs may cost only 10% more. (Don't buy thermally printable or silk-screening discs; they're different.)

For our disc-labeling example, Epson graciously loaned us an Artisan 710 all-in-one printer ($179.99; www.epson.com) with optical disc printing capability and Epson's Print CD software.

Burn data, video, or music to a printable disc as you would normally. It's best to write the data before you print its label, so that if the burn errors out, you won't waste any ink.

Next, launch Epson Print CD. Along the left side, click a button such as Picture to place one of your photos on the label or Background if you would like to use one of Epson's sample pics. Image Adjustment and other buttons let you change the position or color characteristics of your graphic. Click OK when you're done.

Some inkjet printers have special trays for printable CDs, DVDs, and BDs. This multifunction Epson Artisan 710 ejects and retracts its motorized tray like a home stereo component.

Next, click Text to put a title on the disc. Type something such as Maine Vacation 2009 in the upper-left field. Click the Auto-Arch checkbox if you'd like to make the text "wrap around" the center of the disc. Now, click Text Settings, Text Color, and the other tabs to access other fonts and related settings. When you're finished, click OK.

Back in the main window, your title will appear over the background picture you chose. You can "push" the text around the center of the disc by clicking and dragging its letters or numbers. To move the title closer to the center or farther away from it, click and drag the little box in the middle of the text.

Finally, click Print in the top menu and click Print again. The Artisan 710 will eject a gray disc tray just above the paper cartridge. Slip a blank, printable CD/DVD/BD into the center of the tray, white side up, until only about an inch of the disc is showing. Next, on the front left of the printer, press the CD Tray button. The Artisan 710 will retract the disc tray, print your label, and extend the tray once again when the CD/DVD/BD is labeled.

The best way to affix a printed label to an optical disc is to place its adhesive side up on a press. Drop the CD/DVD/BD on the plunger, data side up, and press it down onto the sticky label.

Adhesive Labeling

The next form of disc labeling also supports full-color photos, graphics, and text. In a nutshell, you print a label and stick it onto your CD/DVD/BD with an applicator. This approach is the only method that lets you dress up an ordinary disc, as opposed to one made for inkjet printing or LightScribe (see the sidebar).

That said, you can't just slap any old peel-and-stick label on a CD/DVD/BD. A typical address label, for instance, could peel off and jam the drive. It would probably unbalance the disc, as well. At best, a drive will read and write an unbalanced disc slowly to avoid data errors; at worst, the disc could fly apart and kill the drive. Use only disc-shaped labels such as Avery's 8960 CD Labels For Inkjet Printers ($20.51; www.avery.com). If you own a laser printer, buy compatible labels.

Additionally, you should use an inexpensive press, such as Avery's 5699 CD/DVD Label Applicator ($10.92) to physically apply the label to the disc. This applicator centers the doughnut-shaped sticker before it touches the CD/DVD/BD—which is also critical to balance—and ensures that the contact between the two is smooth and free of bubbles and creases.

Avery supplies a free online label design tool at tinyurl.com/y9h2zlv. For this article, however, we turned to the trial version of SureThing CD/DVD Labeler 5.2 Deluxe Edition ($24.95; www.surething.com).

Install and launch SureThing and then click Disc Label. Under the disc label mockup in the main panel, you'll see three buttons. Hover the mouse pointer over them to identify them as Select Background Picture, Select Layout Style, and Select Font Style. Click these buttons' left or right arrows to quickly browse through a number of starting points for your label's look.

Once you've chosen a general layout, click one of the text fields. Type a title, such as Backup May 2010. Feel free to use the toolbar icons to change the font, justification, and other text attributes. Click and drag the middle of the title to put it where you want it or one of the outer arrows or boxes to rotate the text or alter the spacing between the letters. If you want to get rid of one of the text fields, click it and press DELETE. The Backgrounds, Pictures/Clipart, and other menu items along the left give you more options.

When you're ready, click File and Print. Click the button next to Label Template to select the brand and style of blank disc label paper you're using, such as CD Stomper Standard Face Pro. Be sure to put the label paper in your printer's paper tray; in our Epson Artisan 710, the label side needed to face downward in order to print to the correct side. We clicked Options to set our printer to Text & Image mode. Finally, we clicked OK and Print. If the label lines up with the precut concentric circles on the sheet, proceed to the next step.

Here's the tricky part: Carefully peel off the newly printed label and place it upside down (sticky side up) on the press so that the large base of the plunger, or center post, fits inside the center hole of the label. Avoid touching the adhesive as best you can, especially along the edges of the label.

By the same token, don't touch the label side of the blank disc before you affix the label to it. Skin oil will keep most labels from properly adhering to the disc surface, causing them to peel or bubble over time.

Next, lay the CD/DVD/BD label side down on the plunger so that the top post fits into the hole of the disc. Using your fingertips, press the disc straight down against the sticky surface of the label. Don't let up until you've applied a little finger pressure to all parts of the disc. Don't worry about fingerprints on the data surface, as you can use a soft cloth later to wipe them off from the center of the disc to the outer edge.

Disc labels look great and make it easier to organize your media at a glance. With a little practice, you can crank them out in minutes. ■

BY MARTY SEMS

LightScribe

Billed as direct-to-disc labeling, LightScribe is similar to its more recent, less common rival LabelFlash. The upshot: Burn data, music, or video to a compatible disc and then flip the media over to let the compatible drive burn a visible, permanent label on the other side.

LightScribe labels take about 10 to 30 minutes, but they're very classy-looking with a monochrome color scheme (the discs are available in a handful of colors). Text and bold graphics work best, but you should stick to high-contrast photos. LightScribe labels are permanent, smudge-proof, and fade-resistant when kept out of prolonged direct sunlight.

We used a LightScribe-compatible Plextor PX-B320SA BD-ROM/DVD burner ($179; www.plextoramericas.com) and some Verbatim LightScribe DVD+R media (43 cents and up; www.verbatim.com).

First, download the latest LightScribe System Software for your operating system at www.lightscribe.com, along with the LightScribe Template Labeler utility. You can also use LightScribe Simple Labeler; SureThing; or the label-making software that comes with Nero, Roxio, and other disc-burning utilities to make LightScribe labels.

Install LightScribe System Software and double-click its shortcut. This starts the software running in the background so it will be ready to enable your drive's LightScribe abilities as needed.

Next, install LightScribe Template Labeler. It won't put an icon on your Desktop, but you can find it by clicking Start, All Programs, and LightScribe Direct Disc Labeling. While you're there, click the LightScribe Control Panel and click the top contrast setting for a darker label. Click Apply and OK.

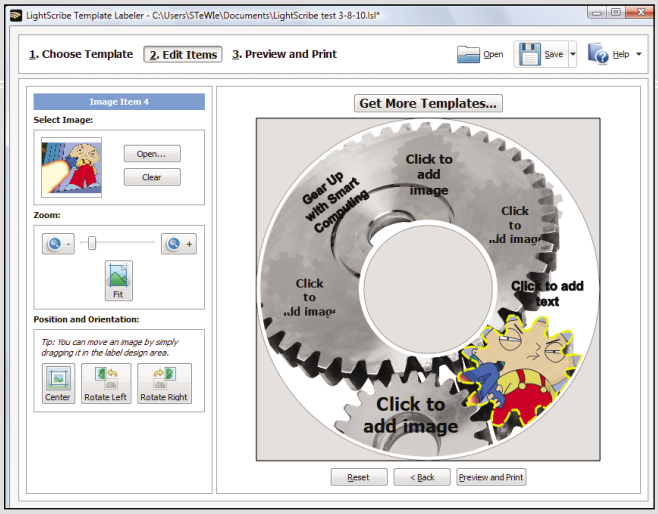
Launch LightScribe Template Labeler. Assuming you've already burned data to a LightScribe-compatible disc, turn it upside down in the drive tray. For example, our disc's gold side faced downward with the silver side up. Close the tray and click OK.

Along the left edge of Template Labeler's window, click a template. It will appear in the main panel with regions of the disc label marked Click To Add Text and Click To Add Image. Select one of the former. Type a title for the disc and adjust the font characteristics and spacing if you like.

Next, choose a Click To Add Image region and then click Open. Select a photo or graphic on your PC and click Open again. When the image appears in the main window, you can drag it to better fit the shape of the region. The Zoom and Position And Orientation toolboxes let you rotate and resize the image as needed. (Don't worry about the Click To Add. . . placeholders you don't use: They won't appear on the disc label.)

When you're done, click Preview And Print. You can adjust the Contrast Level (and thus the darkness of the burned image) here and see what your design will look like on other colors of LightScribe discs on the market. Finally, click Print.

For more designs, click Get More Templates, which will open your browser. Next, click Design Center, a template category, and a subcategory, and then click the Windows link (or Mac or Linux, according to your OS). After you download the file, double-click it and restart LightScribe Template Labeler. You should now see the new category or categories in the scrolling menu on the left. ■



LightScribe.com offers free disc-labeling software for your compatible burner and media. As an example, this is the LightScribe Template Labeler, which is pretty simple to use.

Radio In The Digital Age

HD Radio & Satellite Radio

HD Radio and satellite radio have been part of our new technological lexicon long enough that the terms should seem familiar. But, what specifications are really important to know when you're deciding whether you want to tune into digital radio? Our look at each broadcast technology should give you enough information so you can make a well-informed decision based on the pros and cons of terrestrial vs. digital radio.

What To Know About HD Radio

To put it plainly, HD Radio is the digital version of analog AM and FM radio broadcasts. By upgrading from analog to digital transmission, you can continue to listen to your preferred radio stations, but the sound quality is dramatically improved. Specifically, the reception will be less vulnerable to static, hisses, and fading (with the use of digital processors). HD Radio is a brand of digital radio owned by iBiquity Digital. You might associate the abbreviation "HD" with HDTV; however, HD Radio has nothing to do with the high-definition resolution of your TV. To be more precise, HD Radio is described as having the ability to "boost" the frequencies to CD-quality sound, thereby eliminating most audio distortion.

Not only does HD Radio enhance your listening enjoyment, but it also gives you access to numerous music genres and programs you couldn't hear previously. By offering what's called "multicasting," HD Radio increases the listening options with a greater available number of channels, such as talk radio, complete music sets, and in-studio interviews. Another aspect that sets HD Radio apart from standard analog radio is its duplication of analog programming and multicasting. Multicasting allows a station to air multiple radio programs simultaneously. For instance, one station can broadcast oldies hits during rush hour while it also airs a call-in talk show at the same time by broadcasting one genre on its primary channel (such as 96.1) and a different program on its HD2 channel (such as 96.1-2).

Another feature that is unique to HD Radio is iTunes Tagging, an iPod-inspired technology that lets you "tag" a song—via your HD Radio receiver—that you want to hear again or purchase at a later time. Of course, you'll need iTunes, a compatible iPod (or an iPod touch or iPhone), plus a compatible HD Radio receiver (for docking your iPod) with the capability to tag a song using the Tag button (usually built into the receiver). As soon as you hear a song you love on a local FM HD Radio station, you can press the Tag button. Then, when you connect your iPod to your PC and open iTunes, all of your tagged songs will appear in a

The Sony CDX-GT700HD ($179.95; www.sony.com) is an auto-only CD receiver that includes an HD Radio tuner.

new playlist titled "Tagged," so you can select and download them for purchase. Once they're downloaded to your iTunes Library, you can sync them to your iPod.

Installation & Listening Options

HD Radio is available via a number of upgrades. It's accessible in all of the locations and means of transportation where you're used to listening to analog radio. The components you'll need to experience HD Radio are not complex. For auto-HD Radio, look for an in-dash radio that has a built-in HD Radio receiver. Alternatively, you can add a compatible HD Radio tuner (in your vehicle) to convert it to HD Radio-ready playability, such as the Sony XT-100HD ($149.99; www.sony.com), which may require professional installation. For everywhere else, you'll use a portable or standalone HD Radio receiver or tuner, which we cover in detail below.

There are a limited number of portable HD Radio players and accessories that enable you to enjoy HD Radio wherever you please through your own set of headphones (or earbuds, depending on what you prefer). Some portable players are dedicated to providing new and extra FM HD Radio channels, such as the Insignia NS-HD01 ($49.99; www.bestbuy.com) that lets you assign 10 channels as your favorites, giving you access to them anytime and practically anyplace.

If you're in the market for a new car, you can check with the manufacturer or dealer to determine if the new vehicle you're researching comes equipped with HD Radio-ready hardware. To upgrade your analog radio to HD Radio in your current vehicle, you can opt to install an HD Radio tuner as a DIY project or let your auto dealer install a converter to add to your factory-installed radio. Even if you're a boat owner, you can upgrade to a new HD Radio tuner and receiver. For anyone concerned about the elements ruining your HD Radio receiver, you can look for a model that's UV (ultraviolet)-, fog-, and salt-resistant. Some receivers also include the iTunes Tagging feature.

At-home HD Radio is available in alarm clock, docking station, and stereo speaker format. Whether portable or stationary, many HD Radio players also include support for USB connectivity, MP3 playback, and headphones output. Many are also compatible with multiple generations of iPods.

At tinyurl.com/2mdk6p, you can search for local HD Radio stations by using the interactive map.

When (HD Radio) Problems Arise

When HD Radio is working properly, the sound quality is comparable to that of a CD. However, that doesn't mean interference simply disappears. HD Radio interference is described as "self-noise," which is similar to white noise caused by the digital sidebands that are added to the original analog FM signal. The reason digital sidebands may obstruct the HD Radio signal is because the decoding technology incorporated into the HD Radio signal could identify the sidebands as part of the analog noise detection. Analog signal detection captures the randomly produced HD Radio data and creates self-noise.

The SIRIUS Stratus 6 Dock & Play Radio + PowerConnect Vehicle Kit ($69.99; www.sirius.com) uses your vehicle's power adapter to keep the radio going.

You may find that the only problem you have with HD Radio is the price. Some Portable HD Radio players are available for under $100, but converting to HD Radio in your car, home, office, or home theater can deplete your pockets of several hundred to thousands of dollars.

What To Know About Satellite Radio

Satellite radio is subscription-based and offers extensive programming variety. In the same way you subscribe for extended cable TV packages, satellite radio is available in monthly subscriptions. There are currently two commercial satellite radio service providers in the United States: SIRIUS Satellite Radio (www.sirius.com) and XM Satellite Radio (www.xmradio.com). You might have taken note of the SIRIUS/XM merger that took place two years ago; although the services

reside under the same holding company, each service offers separate packages and fees on individual Web sites.

In general, satellite radio channels are commercial-free with a clear, digital reception—channels won't fade in and out. Programming in the lower 48 states is available 24/7; Alaska, Hawaii, and U.S. territories do not receive satellite reception. SIRIUS and XM Satellite Radio feature similar channel listing and subscription options, but there are still some obvious differences in specific channel packages and pricing.

SIRIUS. SIRIUS includes more than 130 channels, with 69 music channels that are free of commercials. The other content-based channels are divided into more than 50 channels dedicated to news, sports, comedy, talk, and entertainment; and more than 100 channels featuring traffic and weather (for metro regions). For $12.95 per month, you can listen to every SIRIUS channel. For an extra $7 per month, you can combine all of SIRIUS and XM to receive more than 300 channels, including everything from the Martha Stewart channel to NASCAR to XM Public Radio. Aside from these options, SIRIUS offers the following monthly packages: Family Friendly, starting at $11.95; Special Interest, starting at $9.99; and A La Carte, starting at $6.99.

XM. XM's satellite radio offerings parallel SIRIUS' offerings in multiple ways, not surprisingly. XM features more than 170 total channels, 69 without commercials, and more than 55 channels for news, sports, and talk. XM Everything is available for $12.95 per month, which includes music, news, sports, traffic, and talk and entertainment. Mostly, Music and News, Sports and Talk packages are $9.99 per month. XM also provides an all-inclusive package of XM Radio's complete broadcast lineup along with The Best Of SIRIUS for $16.99 each month. Neither XM nor SIRIUS carries local radio stations, but, as mentioned, you can listen to some major metro traffic and news stations. There are upgrades available for Premium XM Radio (online only), Family-Friendly packages, and multi-year discounts for long-term listeners.

Installation & Listening Options

The equipment required to listen to satellite radio includes a satellite radio antenna, radio tuner, receiver, and any of the aforementioned subscription plans. Depending on which satellite radio-ready device you purchase, some or all of these components are combined into one product. The antenna, which captures the satellite signal, is included in many home and car kits. The receiver lets you control channel selection and display artist and track information. Antennas are not built into in-dash receivers, external satellite radio tuners, or home radio tuners. Because the radio tuner transfers the satellite signal from the antenna to the receiver, you'll find that you can purchase combination satellite radio tuners and receivers (primarily home-oriented tuner/receiver devices).

On the topic of receivers, you'll compare four different types: plug-and-play receivers, handheld portable, in-dash, and in-home/home-only. A plug-and-play receiver is a kit that typically contains a docking station or mount, power cable, antenna, and signal cable connection; you can hook up the portable kit to your car stereo and take advantage of the on-screen display. A handheld receiver lets you search for song and artist information wherever you have strong reception; it stores and plays MP3s, as well. Car-only (in-dash) receivers connect to your factory or aftermarket stereo, whereas home-only receivers connect to your current A/V (audio/video) system. A satellite boombox, an in-home option, is an uncomplicated way to add satellite stations in your home because all the necessary components are part of a portable stereo system.

When (Satellite Radio) Problems Arise

The cons that are associated with satellite radio shouldn't be shocking—costs and broadcast coverage are at the top of the list. If you recognize up front that you're paying for one or more satellite radio devices and the monthly subscription, you might have fewer complaints. Though satellite coverage is seemingly universal, weather conditions, terrain obstructions (hills and mountains), and overhead building cover can interfere with broadcast signals.

The New Radio Waves

Sure, you can continue listening to FM radio by way of your familiar analog broadcast, but if you're always turning the dial searching for the next best station, consider whether HD Radio or satellite radio would give you more listening freedom. ▮

BY JOANNA SAFFORD

Digital Radio Lowdown

The ins and outs of digital radio offerings may seem complex at first, but programming you can access is pretty straightforward. You can use this breakdown of HD Radio and satellite radio to determine which type of broadcast you prefer.

What You Need

HD Radio
- HD Radio receiver and tuner

Satellite Radio
- Satellite radio receiver, tuner, subscription, and antenna (no separate purchase required if built-in)

What You Get

HD Radio
- CD-quality reception
- Station multicasting
- iTunes Tagging

Satellite Radio
- Hundreds of station options
- A choice of subscription
- Commercial-free broadcasts

COMPILED BY NATHAN LAKE

Many of our readers come across fast, easy ways to solve a problem or accomplish a task. Well, we'd like to hear about it! If you have a great tip you'd like to share, email us at readerstips@smartcomputing.com. If we print your tip, we'll send you a free *Smart Computing* T-shirt. You'll be the envy of all (well, some) of your friends.

Please include your first name, last name, and address, so that we can give you credit if we print your tip. (And so that we can send your T-shirt to you, of course.) Please limit your tip to 200 words or fewer. Not all tips received will be printed, and tips may be edited for length and clarity.

Short & Simple Tips To Make Things Easier

A Backup Plan

I've created a backup system that allows me to easily have three copies of my data on-hand. In the first month, I back up everything to a re-writeable DVD titled "Disc 1." The second month, I copy everything onto a second re-writeable DVD titled "Disc 2," and "Disc 3" is where I copy everything the third month. After that, I start the process over by erasing Disc 1 and transferring all my new data onto it, so even if I delete something, I'll have a copy of it from two months ago. The redundant system also gives me another backup if the most recent copy becomes damaged.

Shirley C., Clearwater, Fla.

Organize Your Folders

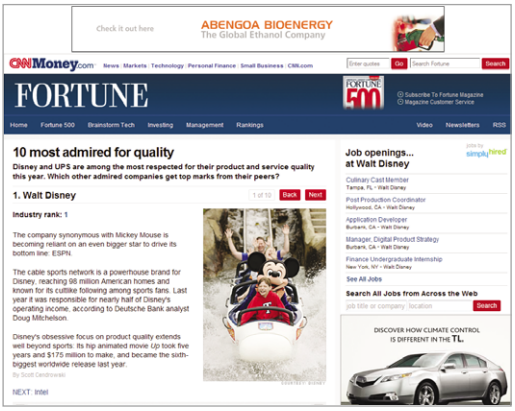
I've found that it's easier to locate your most often accessed folders when they are on top of the folder tree. By putting character symbols, such as a !, @, or a number, in front of the folder title, the folder will be placed above folders that begin with a letter. For example, if you wanted your Pictures folder at the top the folder tree, you could rename it 01-Pictures. A number system is helpful because you can number the folders in the order you wish them to appear.

Pam L., Medford, N.Y.

Capture Images From PowerPoint

Have you ever received a PowerPoint file (with a .PPS or .PPSX extension) from a friend that includes some great pictures that you want to keep or set as your wallpaper? To save the images, you'll just need to changes the "S" in the file extension to a "T," such as from .PPS to .PPT. Then, double-click the PowerPoint file to open the presentation. Right-click the image you want to save, select Save As Picture, name the file, and click Save. Just make sure you're not violating any copyrights for the image.

Bill S., Chula Vista, Calif.



Easy Reading

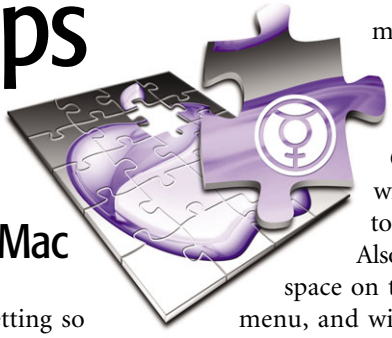
I sometimes have trouble reading online articles because of the type of font, its size, and extraneous material on the Web page. Readability (lab.arc90.com/experiments/readability) from arc90 is a free program that lets you display a Web page using the font type and formatting style you prefer. It also removes ads and other imagery from the page, so you can focus on what you're reading.

Kirk, M., Castle Rock, Colo.

by Seth Colaner
seth@smartcomputing.com

Macs Have Apps Too, Y'Know

Must-Have Applications For Your Mac



With the App Store and the new iPad getting so much attention, nobody has been talking much about Macs in general. True, the iPad is a fascinating product, and iPhone and iPod touch apps are selling like hotcakes, but there are tons of applications for Macs being developed and released constantly, as well.

So where's the love? Right here in this column, that's where. Below are a few choice programs for you to try out—and they're all free.

Quicksilver

www.blacktree.com

Quicksilver has been around for several years, but the developer, Blacktree, continues to release new versions of the popular application launcher/action streamliner. The program is really designed to let you rely almost exclusively on your keyboard to accomplish tasks, which, once you get the hang of it, is far faster than using both your keyboard and mouse.

Quicksilver is a popular Mac application that easily launches programs and files and does much more to boot.

Billed primarily as an application launcher, Quicksilver seems, at first blush, like it just does what Spotlight already does. However, it has more functionality than Spotlight, such as the ability to perform additional actions from Quicksilver other than just opening a file or application. For instance, you can rename a folder or move it to the trash, play or pause an iTunes podcast, and much more. It'll take you a little while to get comfortable with all the keystrokes necessary to fluidly operate Quicksilver, but it won't be long before you'll wonder why you ever bothered to compute without it.

FinderPop

www.finderpop.com

Like Quicksilver, FinderPop is a tool that helps you navigate your Mac efficiently. That's about where the similarities end, though. FinderPop is essentially designed to deliver more content-heavy menus than a typical CTRL-click. For example, if you CTRL-click a file, you'd normally get options such as Open, Open With, Move To Trash, etc. But with FinderPop, you also get shortcuts to other folders and processes.

Also, FinderPop lets you click any blank space on the menu bar to get the FinderPop menu, and with certain key/click combinations, such as Command-CTRL-click, you get more options such as viewing the contents of a folder in a pop-up list. Note that FinderPop is not yet compatible with Snow Leopard, though the developer promises to offer support soon.

SlipBox

markusguhe.net

There are plenty of applications out there for mind-mapping and organizing, but SlipBox strikes a chord with me. By the developer's own description, SlipBox is "a loose collection of slips stuffed into a box;" an apt description of the way some of us creative types organize our ideas and moments of inspiration if I've ever heard one.

You can record notes, ideas, and thoughts in SlipBox as you would with a scrap of paper. However, SlipBox lets you tag your slips with keywords and a source, so when you need to recall it, you can just do a quick search within the application to pull up slips pertaining to a given keyword (or set of keywords). It's an elegantly simple but eminently useful tool for organizing disorganized thoughts.

ClamXav

www.clamxav.com

ClamXav is another application that's been around for a while, but it's no less worth a plug here. It's a virus checker for your Mac; no, there aren't very many viruses out there for Macs, but it's wise to use this tool anyway. In addition to the eventuality that Mac users may be inundated with viruses someday, you're always at risk of spreading malware to others through corrupted files. ClamXav is very easy to use, and it's free. Why not be safe instead of sorry?

Don't Forget About Your Mac

Just because the iPhone, iPod touch, and iPad are getting all the attention, don't forget that your Mac is still the backbone of your computing life. There are some great applications available that will enhance your computing experience, so give the above programs a whirl. ▮

BY SETH COLANER

Mac Corner
GarageBand Rocks & Rolls

Several years ago, iMovie was arguably the coolest, most powerful built-in application on new Macs. In recent years, however, GarageBand has emerged as a surprisingly powerful yet easy-to-use audio recording program, and it may have supplanted iMovie as the most compelling built-in application.

What You'll Need

Theoretically, you don't need any equipment to record in GarageBand other than what's already on your Mac. You can use the internal microphone to capture audio, and you can actually use your QWERTY keyboard to play software instruments.

However, the quality of the internal mic is too poor to capture a quality recording, and playing a software instrument is immensely easier when using a piano-like keyboard. Thus, you should consider acquiring a recording interface.

Recording interfaces come in all shapes and sizes. If you want something versatile, consider a device such as the Presonus AudioBox USB ($179.95; www.presonus.com), which has a USB interface and has enough ports for two XLR (a common audio device connector) microphones or two 1/4-inch inputs at once. You can also use a USB microphone or keyboard, which simply connects to your Mac's USB port (in which case, you don't need the AudioBox).

If you have a MIDI (Musical Instrument Digital Interface) keyboard, you'll need a MIDI interface to connect it to your computer. Ports for your MIDI devices can be found on devices such as the Presonus AudioBox USB that we just described.

Getting Started

When you launch GarageBand, you can choose from a number of options in the Project window. GarageBand actually has music lessons available if you're new to the piano or guitar. Click Learn To Play and select Piano Lesson 1 or Guitar Lesson 1 to give the lessons a try. The video lessons are interactive and ideal for beginners. You can download additional lessons from the Lesson Store. Click Lesson Store in the Project window, click the Basic Lessons tab, and download all nine lessons for either piano or guitar. The lessons download right into the Learn To Play area, so you can watch the lesson within a few minutes.

Another tasty treat is Artist Lessons, which features popular stars such as Norah Jones, Sting, Ben Folds, Fall Out Boy, and others teaching you how to play one of their songs. In the Lesson Store area, click the Artist Lessons tab to download a lesson. Note well, however, that these special artist lessons cost a few dollars each.

Magic GarageBand, another feature you can access from the Project window, has several premade songs for you to explore in a variety of genres, such as blues, Latin, jazz, and country. Select one and click Choose to open it.

When a Magic GarageBand project opens, you'll see a simulated room with graphical instruments. You can swap these for different instruments to play with different sounds, even muting or soloing tracks and adjusting their volume. You can even jam along with the music and record your own take.

Setting Up Your Project

Most people want to use GarageBand to record their own music. To launch a new recording project, click New Project in the Project window. You have a number of project options to choose from: Piano, Electric Guitar, Voice, Loops, Keyboard

When you open GarageBand, you have a number of project options to choose from.

GarageBand features piano and guitar lessons to help the beginner get started.

Collection, Acoustic Instrument, Songwriting, and Podcast.

These projects are made up of different kinds of tracks: real instruments, electric guitar, software instruments, loops, and podcasts. A "real" instrument is anything that is recorded using a microphone. An electric guitar is recorded a little differently (by plugging a 1/4-inch cable directly into the recording interface instead of using a mic), so GarageBand therefore considers real instruments and electric guitars to be different things.

A "software" instrument, on the other hand, is one that is controlled by a device such as a USB or MIDI keyboard with piano-like keys, but the sounds it creates are generated by software on the computer. When connected to your computer and playing through GarageBand, you can assign sounds to such a device from the list of available software instruments, such as pianos, organs, guitars, orchestral instruments, and more.

Loops are premade sections of music, usually a drum beat or simple instrumental part. You can add a loop to your project and "loop" it (that is, make it repeat again and again). For example, if you find a four-measure drum beat you like, you can loop it to play over the entire song. A Loops project is laid out by default for this kind of music-making. You can use the included Apple Loops or create or import your own loops.

Podcasts are in a category all their own, as well. You would create a Podcast project if you were creating an actual podcast or if you just wanted to make an audio project with a voice-over track or two with music underneath.

With that in mind, note that various projects you select will be set up for various configurations of real instruments, software instruments, and loops. It doesn't really matter much which one you choose, though, as you can add or delete tracks of all three kinds after you launch your GarageBand project.

When you have decided which type of project you wish to work on, select it and click Choose. When the dialog box appears, name your song and select parameters such as the tempo, time signature, and key. (You can alter all of these later on, too.) If you aren't sure what some of those things are, you can just use the default settings for the time being. After you've made your selections, click Create.

The Layout

For the purpose of illustration, select a Songwriting project. When your project launches, you'll be greeted by a mostly empty recording session window.

The track list is on the left side of the screen. (A song is made up of multiple "tracks." For example, the vocal part is one track, the guitar part is another track, and so on. In this case, there is a Voice, Acoustic, Piano, Muted Bass, and Drums track.)

Each track has its own set of controls. The little speaker icon mutes the track, the headphone icon solos it out so it's the only one you can hear, and clicking the lock prevents any inadvertent changes. When you're mixing and editing a complete song, having the ability to mute or solo a track is invaluable.

The circle to the right of those controls lets you pan the audio left or right. To the right of that, you can adjust the track volume by sliding the volume knob to the left or right.

At the bottom of the window, you'll see the record and playback controls as well as a few other buttons. The track information is on the right part of the screen. In the middle of the screen is mostly empty space. This is called the Timeline, which is where you can see and edit the audio. (In this particular song, there is already a drum track, which is represented by a thick blue line.)

Recording Your Music

With your headphones or speakers on (your choice), click the Play button, located at the bottom of the GarageBand window. If you like the default drum track, press the Spacebar to stop the playback. If you don't like it, click the blue line and press DELETE.

Next, click the eye icon at the bottom of the window to bring up the Loops menu. Click All Drums and browse the many options for drum loops that appear below. When you find one you like, click and drag it to the Drums track at the beginning of the Timeline. To loop the drum

Magic GarageBand is a fun feature that can help you understand certain styles of music better and improve your jamming skills.

track, position the cursor at the top-right corner of the drum audio track (your cursor should turn into a circle with an arrow in it) and click and drag as far as you want to loop the drum track through your song.

To build on your drum track, click the Acoustic track. Strum a few bars of what you're planning to play; the level meter (next to the track name) will show flashing green, yellow, or red lights. Green means the mic level is acceptable, while red means it's too loud and you need to either turn down the mic input level or reposition the mic.

At the bottom of the screen, click the Record button (with the red dot in the middle) and start playing after the count-in. When you're done playing, press the Spacebar. That's how you record a track with a microphone.

To record a software instrument track, click the Piano track. Then, click Window and Keyboard or Musical Typing (depending on whether you're using a USB or MIDI keyboard, or the QWERTY keyboard of your computer). This action will bring up a software keyboard you can play with your mouse, QWERTY keyboard, or connected USB or MIDI keyboard. After checking the input levels (as you did before), click the Record button and tickle the ivories. When you're done, click the Play button to stop.

Because the Songwriting template doesn't have an electric guitar track ready to go, you'll have to add one. Adding a track, however, is very simple. Click the Plus (+) sign at the bottom left of the window. When the dialog box appears, you have the option of selecting Software Instrument, Real Instrument, or Electric Guitar. In this instance, we want an electric guitar track, so check the radio button next to Electric Guitar and click Create.

The new track will appear at the bottom of the track list. What's great about an electric guitar track is that GarageBand has a host of built-in amplifier and effects pedals (often called "stompboxes") to create almost any conceivable electric guitar sound.

The basic layout of a GarageBand Songwriting project includes default Voice, Acoustic, Piano, Muted Bass, and Drums tracks.

Granted, you can play your electric guitar "clean"—that is, with no effects at all—or through your own physical effects pedals, but the software alternatives are sometimes just too good to pass up.

Click the newly created electric guitar track, which is called Clean Combo. On the right side of the screen, you'll see an image of an amplifier. In this area, you can adjust the amp knobs to customize the sound, switch amps by clicking the Left and Right arrows, and add stompboxes by clicking the area under the amp and dragging different pedals to it.

Mixing & Mastering

Mixing tracks is the art of balancing volume, tone, and timbre between all the instruments and voices to create a blend that is most pleasing to the ear. To mix a song in GarageBand, use the mute and solo features, volume controls, and panning functionality to get the correct balance.

Part of completing a project is applying effects to certain tracks. Although you can add all sorts of amp and stompbox effects to your electric guitar track, there are many effects you can apply to other audio tracks, as well, including echo, reverb, overdrive, and more.

To add effects, click a track, and on the right side of the window, click Real Instrument (or Software Instrument, or whatever is on the tab on the left). Click the Edit tab, click one of the empty slots to bring up the Effects list, and choose an effect. Under the name of the effect, click Default to bring up a list of presets or click Manual to adjust the effect's settings yourself. Then, click the effect's icon to bring up a dialog box where you can tweak the settings. To turn an effect on or off, click the blue rectangle next to the effect's icon.

Sharing

When you have a song completed, there are a few options for sharing it. Click Share and select Send Song To iTunes, Send Ringtone To iTunes, or Send Podcast To Web, depending on the type of project you've made. For example, if you want to send the song to your iTunes library, select the first option. You'll be prompted to enter which iTunes playlist you want to send the song to, Artist Name, Composer Name, and Album Name. Enter the information and click Share.

If you just want to export the song and save it on your hard drive, click Share and select Export Song To Disk. Click Export and save the song to your desired folder.

Finally, to export the song right to a CD, insert a blank CD into the optical drive, click Share, and select Burn Song To CD.

Note that the above processes don't save the project file; they aggregate all the tracks you made, export them as audio, and compress them into one audio track.

Tip Of The Iceberg

There are simply too many features in GarageBand to cover them all in this space. However, as you explore GarageBand on your own, you'll continue to discover features that will help you realize your creative ideas. ❚❚

BY SETH COLANER

Find It Online
Rescue A Pet

Compiled by Kris Glaser Brambila
Illustrated by Megan Kester

Adopt-a-Pet.com

www.adoptapet.com

Perhaps one of the most obvious ways you can rescue an animal in need is to adopt one. This site makes it easy to find animals in your area that are looking for their "forever homes" by advertising animals from hundreds of animal shelters, rescue groups, and humane societies all over the United States. On the main page, start by clicking the type of animal you are looking for, including dogs, cats, and other animals such as rodents and reptiles. You can search by ZIP code or city, distance to the shelter, breed, gender, age, and more. You can also use Adopt-a-Pet.com to find a shelter or rescue group in your area or discover ways to "lend a helping paw."

AnimalShelter.org

www.animalshelter.org

This site helps you find your city's animal shelter and rescue groups. After clicking Animal Shelters on the main page,

That's NEWS To You

Finding the appropriate online group to match your interests can be a monumental task. So each month, we scour the Internet to bring you the friendliest forums and most interesting bloggers the Web has to offer. This month, we delve into the stories of two animals who have been rescued and given new lives, and who strive to help other animals along the way.

Tibby Tales

www.tibbytales.blogspot.com

Ever wonder what the lives of rescued animals look like after they are placed in their forever homes? This blog is written from the perspective of Tibby, a 2-year-old female schnauzer who was rescued from a shelter and now lives with her family in New York. Tibby shares stories about her daily activities, helps her owner sell pet collars, and assists other pets in finding homes by highlighting their stories every Saturday.

Romeo The Cat

www.romeothecat.com

This blog is from the perspective of a Persian cat named Romeo whose goal is to help his people find homes for other animals in need, with a fundraising program called FURPOWER. Romeo and his partners have come a long way to donate resources to various animal shelters and organizations and are sponsored by familiar companies such as FURminator and Feline Pine Cat Litter. You can donate to a different animal organization each month by clicking the Donate link at the top of the page.

Romeo The Cat is one of many online organizations striving to raise money for homeless animals.

search for nearby shelters by clicking your state or by entering your ZIP code and selecting a distance radius of 10, 25, 50, or 100 miles. Then, you can browse the results and visit each shelter's Web site for more information. You can also use AnimalShelter.org to search for potential pets or discuss general animal topics, such as animal health, in the Discussion Boards.

The Humane Society Of The United States

www.humanesociety.org

Want to keep up-to-date on all the latest animal-related news or learn how you can help rescue animals all over the world? This site is a great resource for learning about animal issues, such as cruelty, puppy mills, dog fighting, and more, and how you can take action by making a pledge, donating funds, or volunteering at your local humane society. On the main page, click Issues on the left side and then click a topic to learn more about it. If you select Donate on the right side of the main page, you can give a one-time money gift in any increment you choose or make a monthly donation. Clicking Take Action leads to suggestions on how to raise awareness about animal issues or how to volunteer at the humane society.

Freekibblekat.com

www.freekibblekat.com

In April 2008, a 12-year-old girl named Mimi Ausland created this site to help feed hungry cats in animal shelters all over the United States. How does she do it? When you visit this site, you are asked to play Meow Trivia. Each time you answer a question (correctly or incorrectly, it doesn't matter), 10 pieces of kibble are donated to animal shelters to help them feed their cats. Donations are backed by pet food companies Castor & Pollux and Felidae Cat Food, and kibble is distributed to 14 different shelters nationwide. You can also donate kibble to your canine friends by visiting the original freekibble.com Web site and playing Bow Wow Trivia.

FosterDogs.com

www.fosterdogs.com

If you can't adopt a dog for the long term, perhaps you can become a pet foster parent. What exactly does it mean to foster a dog? This Web site offers all the information you need to understand what fostering is (and is not), how to start fostering a dog, and resources and support for people who already act as a foster parent. If you'd like to volunteer as a foster parent, click Fostering: Getting Involved on the left side of the main page and then click I'm Ready! How Do I Get Started? on the bottom of the resulting list. Other resources include tips for placing your foster dog in a forever home and how to handle dogs with behavioral issues.

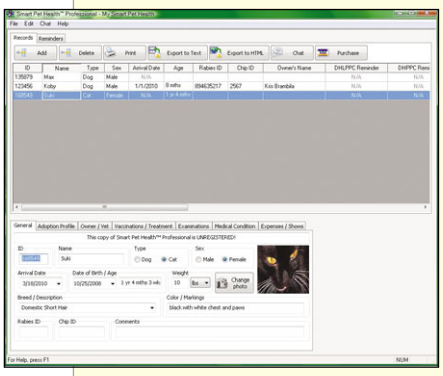
Share The Wares

Some of the best apples in the online orchard are the free (or free to try) programs available for download. Each month, we feature highlights from our pickings. This month, we show pet rescuers how to keep track of all the animals in their shelters and give kids a fun way to learn about pet adoption.

Smart Pet Health Professional

www.smartpethealth.com

This software, ideal for animal shelters and other animal rescue organizations, helps you keep track of all the animals under your care. You can start a record for each animal and include information such as an animal ID, name, gender, breed and description, vaccinations and treatment, and expenses. You can even include a photo. On the Adoption Profile tab, you can select boxes that apply to the animal's personality and behavior and then export the information to HTML (Hypertext Markup Language) to use on a pet adoption Web site.



Smart Pet Health Professional helps you keep track of all the animals at your shelter or rescue organization.

To download a free trial, navigate to the Web site and click Download at the top of the main page. When prompted, save the file to your hard drive. When the file has downloaded, right-click it to begin the installation. The free trial allows you to open the program 30 times, while an unlimited version costs $149.95.

Purrfect Pet Shop

www.gamefools.com

Some animal shelters require children to be a certain age before they can volunteer. If you have a youngster who wants to learn about animal rescue, this game can teach them the basics of animal adoption by feeding, grooming, and caring for cats and dogs. Players can purchase supplies for their animals with money donated by customers and even create their own cats or dogs to take care of.

To download a free trial of the game, point your browser to the Web site, enter Purrfect Pet Shop in the Search field at the top of the page, and click the arrow next to Find Game. On the results page, click Purrfect Pet Shop and then click Download Now. Save the file to your hard drive, wait for the download to complete, and then double-click the file to begin installation. You can purchase a full version of the game from the Web site for $19.95.

Web Tips
Enhance Your Time Online

Turn Videos Into PDFs

Problem: I enjoy watching how-to videos, but I find it difficult to take notes as I'm watching the video.

Solution: Vidinotes (www.vidinotes.com) lets you capture video images from FLV (Flash video) files and print them complete with notes. Browse to a video on your PC or upload a video from YouTube (via the KeepVid.com FLV converter) and then watch the video and capture up to 30 video stills. Vidinotes labels each note in chronological order and lets you edit the title and note section of each slide. The final product will include each slide (in the order in which you created them) with your notes attached. Vidinotes is ideal for more than how-to videos; you can capture and convert exercise videos and online lectures.

Find Other Uses For Household Items

Problem: I've heard that my household products can serve secondary functions. How can I use these products in alternative ways?

Solution: AltUse.com is an archive of secondary uses for everyday in-home products, such as lemon juice, vodka, and toothpaste. If you browse the products section, you'll find a host of familiar items that have one or more alternative uses. For example, select olive oil, and you can read the four pages dedicated to olive oil uses, including dry skin ointment, bicycle chain lubricant, and damaged hair control. Or, you can search by uses, so you can view the items according to their applications, and opt to sort them by their popularity throughout the day, week, or month.

Free Audio Books

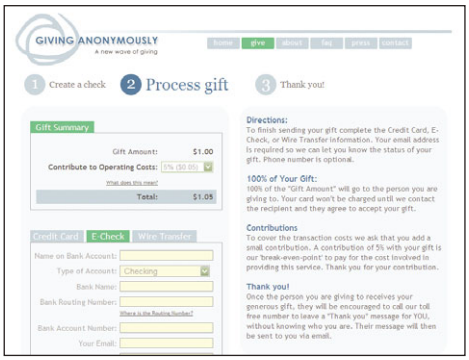
Problem: I enjoy listening to audio books, but I don't have a large budget for them. How can I download them free?

Solution: BooksShouldBeFree (www.booksshouldbefree.com) is a convenient resource for any bookworm/audiophile. It's an online library of audio books available in MP3 (via .ZIP file) and iTunes podcast formats. The Top 100, Children, Fiction, Fantasy, and Mystery categories hold an abundance of classic literature, so if you're interested in listening to "King Lear," "The Legend of Sleepy Hollow," and the like, you'll find a lot to love. If you download to iTunes, you'll receive the first chapter immediately; download subsequent chapters by clicking the Get button in the iTunes Podcasts category. (Change to List view to see this option.) Similar audio book sites include thoughtaudio.com, podiobooks.com, and librivox.org.

Donate Anonymously

Problem: I would like to donate some money to a neighbor. How can I do this anonymously?

Solution: Your generosity can remain private when you use Giving Anonymously (www.givinganon.org), a site that mediates between you and your neighbors, community, friends, and family. The process requires three steps: creating a gift check, processing your gift, and sending it to the recipient.



Giving Anonymously lets you donate money via credit card, e-check, or wire transfer to a recipient without his or her knowledge.

Enter information to make a Giving Anonymously sponsored check along with the recipient's email address, phone number, and an anonymous message. Your payment options include credit card, e-check, or wire transfer. Take note of the Gift Summary box in step two to see how much you are giving in total. Giving Anonymously automatically adds a 5% operational cost to your gift amount. You can adjust this up to 20% or down to 0%, though a 3% minimum is required for gifts over $500. Finish processing the check, and then you'll get a confirmation when the gift is delivered.

Locate Auto Parts

Problem: I need to find a part for my vehicle, but I'm not sure how to track one down and purchase it online.

Solution: Searching online for the perfect auto part to match your sports car's engine or truck's electrical system can be annoying if you don't know where to go. Car-Part.com is a quality Web resource for buying parts, searching via image, and recycling. The site features an inventory of more than 125 million car parts. Get started by entering the year, make, and model of your car; the part you need; and your location. There are multiple sorting filters, as well, including Sort By Price/Select Sort, Damage Units/Miles, Part Grade, Distance, and Year. The results page provides data including the part description, stock number, price, and dealer information. ▮

BY JOANNA SAFFORD

To Tweet Or Not To Tweet?

That Is The Question

President Obama is a member. So are The White House, FCC, NASA, NASDAQ, U.S. Library of Congress, Gov. Arnold Schwarzenegger, Al Gore, and the Dalai Lama. Also count Microsoft's Bill Gates, Google's Eric Schmidt, HP, Dell, Sony, Canon, IBM, Target, and Best Buy as belonging. And then there's *The New York Times*, *The Wall Street Journal*, Glenn Beck, Stephen Colbert, Oprah Winfrey, Dr. Phil, Ellen DeGeneres, Martha Stewart, Conan O'Brien, Ben Stiller, Tom Hanks, Dolly Parton, Shaquille O'Neal, Drew Brees, and, of course, Ashton Kutcher and Demi Moore.

Add these politicians, entities, celebrities, sports stars, businesses, TV shows, journalists, and personalities to millions of others and you have the Twitter nation—the most popular micro-blogging, social networking community this side of Facebook (www.facebook.com). Even those without a clue about what Twitter actually does at least know of its existence, partially due to Twitter's unique name and partly due to its staggering growth since launching in 2007.

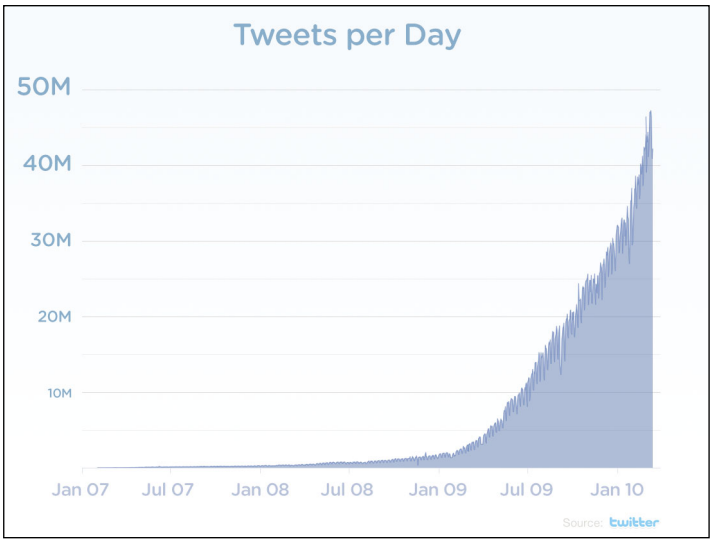
As Twitter states, the service primarily "serves as a real-time information network powered by people around the world discovering what's happening and sharing the news." In short, much in the same way that email, instant messaging, VoIP (Voice over Internet Protocol), RSS (Really Simple Syndication) feeds, and blogs changed how we communicate, Twitter has done likewise via "tweets," or the short messages members post to their Twitter home pages from PCs, notebooks, smartphones, PMPs (personal media players), gaming consoles, and other devices.

Despite Twitter's ever-expanding reach, many people remain unclear about what Twitter is. We'll clear up some of that ambiguity, as well as detail ways people use Twitter, and help you create your own free account to post your first tweet.

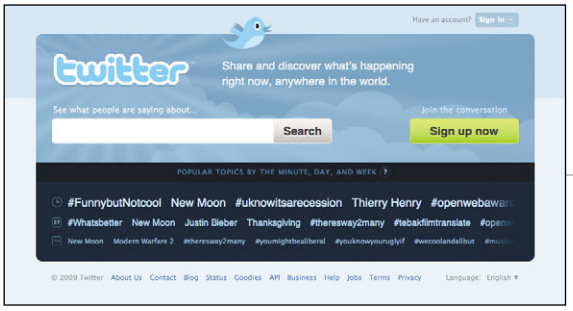
Twitter Comes Alive

Immediately after Jack Dorsey, Biz Stone, and Evan Williams founded Twitter in 2007, it was (and somewhat still is) dogged by a notion that it offered little more than a new way for anyone to exchange pointless drivel whenever the mood struck, such as, say, John Doe posting, "I just brushed my teeth" or Jane Doe proclaiming, "Seeing 'Avatar' today." Though there's some truth to such ideas, Twitter has converted many naysayers open to discovering its real information-exchanging potential, such as, say, John Doe tweeting, "What's the best digicam for beginners?" and receiving advice from other Twitter members, including, possibly, professional photographers.

Undeniably, Twitter is now a communicative force anyone with Web access can tap into from Web-connected devices, including smartphones that Twitter members can use from nearly any location. Twitter has also become a sizable weapon for businesses looking to directly reach customers with customer support, announce deals and



This chart from Twitter shows how the number of tweets per day (in millions) has drastically shot up since Twitter launched in 2007.



Want to know what Twitter members are talking about down to the month, day, and minute? You can find out from Twitter's home page.

new initiatives, and gather valuable firsthand feedback. Elsewhere, Twitter has given journalists a tool to provide real-time, in-the-thick-of-it coverage and celebrities a means to circumvent paparazzi and tabloids to address fans directly concerning rumors and more. Politicians, meanwhile, are using Twitter to reach constituents directly, with perhaps the best recent example being President Obama's trailblazing use of Twitter to spread his message directly to voters during his 2008 presidential campaign.

So, just how popular is Twitter? So popular that this year the privately funded company expects to support 1 billion search queries daily and several billion tweets posted every hour worldwide. So popular Twitter now comes preloaded on many devices; is used in nearly every country; and is available in English, French, German, Italian, Japanese, and Spanish. So popular that in a March 2010 newsletter, Stone stated there are now 70,000 registered Twitter-related applications, registered accounts have shot up more than 1,500%, and Twitter's staff has grown by 500%. In other words, Twitter is massively popular.

The Twit In Twitter

In essence, Twitter lets people communicate a message instantly and simultaneously to large numbers of people (as opposed to one or a few at once). Combine elements of email, instant messaging, and blogs and you have the Twitter experience, which, beyond posting tweets, involves "following" other users' tweets, following "Lists," private messaging with individuals, and much more.

The "Twitter" name stems from the "twittering" birds emit when they communicate, Twitter states. Twitter adds that its ability to spread real-time information also lets groups "mimic the effortless way a flock of birds move in unison." Specifically, Twitter communication occurs via tweets, or messages limited to 140 characters each that users can create and receive from their Twitter home page, as well as post to blogs and Web sites and access via apps for various platforms.

The 140-character limit patterns the 160-character limit that SMS (Short Message Service) or text messages have. Thus, tweets consist of 20 characters reserved for your username and 140 characters to convey your message. Cleverly, Twitter users have spawned creative ways to exchange information succinctly, as well as created an entirely new lexicon of Twitter-centric words. One creative example is how Twitter users share URLs by using URL-shortening services. Twitter's service of choice is bit.ly (http://bit.ly). An example of Twitter-specific language, meanwhile, is "retweeting," which Twitter users shorten to RT and that represents a previous tweet from someone else that's being reposted.

Another integral Twitter component is "following," which involves receiving Twitter updates on your home page from another member as she posts them. Conversely, other members can follow you. Following is as easy as clicking the Follow button that appears on members' home pages. When someone begins following you, Twitter informs you via email. Security-wise, you can block someone from following you, report members you suspect are spreading spam, and keep your profile private (although "public" is the default setting). From your home page, you can view who you're following, who is following you, and the Lists you're following.

Lists let you organize many Twitter members who share a common interest into one group. Thus, rather than following 15 different politicians on Twitter separately, you can create a Politicians List that groups them together. Twitter would then create a link—@johndoe/politicians, for example—to one page where you can oversee the tweets members on the List are tweeting. You can add members to a List from your Following page or using Twitter's search engine. Currently, users are limited to 20 Lists per account. You can find Lists others have already created on their home pages. Another good source is Listorious (www.listorious.com), which, among other things, includes The Top 140 Lists On Twitter.

Trending Topics is another important Twitter concept to grasp. Viewable on a home page's right side, Trending Topics is a continually changing list of the 10 current terms most frequently being mentioned on Twitter. You can view Trending Topics on a local, national, and global scale and view real-time tweets on a topic. Seton Hill University, for example, was a Trending

NBC created a Twitter Tracker for the 2010 Winter Olympics to show how Twitter users were reacting in real time to Olympic events as they occurred.

Topic at this writing concerning the university's recent announcement it will provide new students iPads.

Related to Trending Topics are hashtags, or #s, which are used to categorize tweets. Say you tweet "Looking for Lakers tickets. #Lakers." Twitter will then add the tweet to its search results. When someone searches for #Lakers, your tweet will be included in the results. If enough people use the #Lakers hashtag in the same timeframe, "Lakers" would become a Trending Topic.

Create An Account

To create a free Twitter account, head to www.twitter.com and click Sign Up Now (or Get Started Now, depending on which browser you use). The Join The Conversation page that follows will ask for a name and email address and whether you want a public or private account. You'll also need to create a username and password and decide if you want Twitter to send you email updates before clicking Create My Account.

Next, Twitter presents three ways to begin following other members, including searching among 20 categories (Charity, Technology, Travel, etc.) of Twitter members; finding friends and colleagues already using Twitter by searching your Gmail, Yahoo! Mail, and AOL email contacts and address books; and using Twitter's search engine to find others by username, first name, last name, or business name. Further, you can find other users at any time via the Find People link on your home page. Once you've found members to follow, click You're Done. Upon completing the signup, Twitter will present your home page. For security reasons, you'll need to respond to a notification email that Twitter sends before you can use all Twitter's features.

On your home page, a menu at the top presents Home, Profile, Find People, Settings, Help, and Sign Out options. From Settings, you can change your account settings and password; set up Twitter for mobile phone use; configure how you receive updates from new followers, Direct Messages, and email updates; add a photo, location, personal Web address, and short bio to your profile page; and choose a background image and design colors.

Near the home page's top, you'll also see a What's Happening field in which you'll enter tweets. Directly below is an option to add a location to your tweets. To create your first tweet, simply type your message in the field and click Tweet. The post will appear on your home page and on the page of those following you. Further, tweets from those you're following also appear on your home page. For each tweet, you're given Reply and Retweet options as well as the ability to add the tweet to your Favorites.

In the right column, Twitter details how many people you're following, how many are following you, and the Lists on which you appear. Additionally, links to your Direct Messages, Favorites, and Retweets you've posted are provided. Lists you create, meanwhile, appear directly above sections for Trending Topics and Following, the latter of which includes thumbnails of fellow tweeters you're following.

Get To Tweeting

We've only begun to touch on all things Twitter-related. Fortunately, there are scads of sources online offering advice, tutorials, and more, including Twitter's forums (twitter.zendesk.com/forums), official blog (blog.twitter.com), and Help page (twitter.com/help/start). Perhaps the most definitive third-party resource is Mashable.com's "The Twitter Guide Book," which contains video tutorials; customization guides; tips for sharing music, video, and photos; and personal and business reasons to use Twitter. For definitions of Twitter-specific terms, meanwhile, see Twictionary (twictionary.pbworks.com) and Twittonary.com. ■

BY BLAINE FLAMIG

What's A Tweet, Anyway?

Spend even a few minutes at Twitter (www.twitter.com) and you'll detect there's a different language being used. The following are definitions for common Twitter terms in the order you'll likely come across them.

tweet—An individual message or post; also used as a verb, such as "I'm going to tweet about my new motorcycle"

tweeter—A person who posts tweets

following—The act of receiving the tweets, or updates, from other Twitter users as they're posted; in turn, other Twitter members can follow your tweets

DM—Short for direct message; private messages sent between members

RT—Short for retweet; using "RT" in a tweet signifies you're reposting an original tweet from another user

Lists—A method for grouping together Twitter members who share a common trait so you can view their tweets in one place vs. following each member separately

#—Hashtags help categorize tweets so they're more easily searchable; searching for #NASA, for example, would return real-time tweets containing the #NASA designation

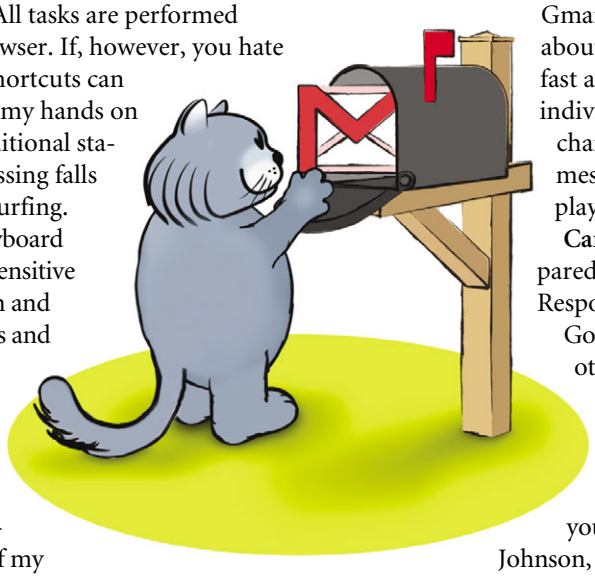
Trending Topics—Viewable on a home page, Trending Topics are the top 10 real-time topics most frequently being mentioned on Twitter

tiny URL—A URL address shortened using a URL-shortening service; Twitter uses the bit.ly service by default

Gmail Goodies

If I had to use one email service for the rest of my computing life, it would be Gmail (www.gmail.com). Why? Because it's free, it's reliable, and it's incredibly easy to use. It's also laden with features, options, and lots of cutting-edge technology that we computing professionals refer to as "cool stuff." This month, we'll take a look at a few of my favorite Goodies pronounced G-oodies, for those not fluent in Gspeak.

Using Gmail is convenient because you don't have to download or install anything. All tasks are performed through your current Web browser. If, however, you hate doing mousework, keyboard shortcuts can save time and energy. Keeping my hands on the keyboard also provides additional stability, which prevents embarrassing falls off my chair during intensive surfing.



Gmail offers a plethora of keyboard shortcuts, all of which are case sensitive and thus susceptible to irritation and chafing. To enable, click Settings and the Keyboard Shortcuts On radio button. (Be sure to click Save Changes and then sign out and sign back in to Gmail for your changes to take effect.)

The Learn More link will display a complete list, but a few of my most beloved keyboard shortcuts include "c" to compose a message, "r" to reply, "f" to forward; and TAB-ENTER to Send. There are more than 50 keyboard shortcuts, but for $19.99, the Gboard (www.gboard.com) aggregates 19 of the most frequently used shortcuts on one colorful USB keypad.

I have seven Gmail accounts thankyouverymuch so in order to minimize LFS (Login Fatigue Syndrome), I have mail from six accounts forwarded to the seventh. It's so clever, it makes my head hurt. To do this, click Settings, then Forwarding And POP/IMAP. In the Forward A Copy Of Incoming Mail To field, insert your forwarding address. Forwarding isn't limited to Gmail accounts, so to forward Gmail to your Earthlink, Comcast, or other account, simply insert that address instead.

If you want to add some snazz to Gmail, give it a makeover by clicking Settings, then Themes. Select any of the available themes or create your own. Personally, I like to coordinate themes with whatever I'm wearing. I mean, what's the point of computing without color coordination? ("Honey, does this theme make me look fat?")

Some themes change throughout the day, which I find disorienting and somewhat spooky. If you select a location-based theme, Gmail will coordinate theme changes with your local sunrise, sunset, or weather. You will be presented with a Country/Region drop-down menu from which you can select a country. Then type in the name of a city. For the fun of it, I entered Dushanbe, Tajikistan, which resulted in a snippy message from Gmail telling me to stop fooling around. Ouch.

Gmail is continually developing new features, which you can try by clicking the Labs tab in Settings. A few of my favorites include:

Quick Links. This feature adds a frame to the left side of Gmail that provides one-click access to just about any area within Gmail. I use it for fast access to Settings, Labs, and important individual messages—well, on the off-chance I have any important individual messages. With a Gmail page or area displayed, click Add QuickLink. Very handy.

Canned Responses. Save, then send prepared messages by clicking the Canned Responses link in the Compose screen.

Got the Wrong Bob? At one time or another, you probably sent a message to the wrong Bill or Helen or Bob, perhaps emailing Bob (your employer) instead of Bob (your bookie). Uh-oh. When this is enabled, Gmail will ask if you meant to include Bob Anderson, Bob Johnson, or Bob Aleaux, based on the similarly named individuals you most frequently email.

Inserting Images. Allows you to place images, including photos, within the body of a message.

Undo Send. If you accidentally click Send, this feature gives you a few additional seconds within which to abort the Send if you can react quickly. Bonus Tip: Practice screaming, "Arrrghhhh! Too late!"

Sender Time Zone. If you have ever received an email and thought it best to follow up by phone, enabling this feature displays green icons next to senders who are probably awake and reachable, if it's between 9 a.m. and 6 p.m. in the sender's local time zone. Red icons appear next to those who might be sleeping, intoxicated, or out of the office.

I've barely scratched the surface when it comes to Gmail's capabilities, but if you're intrigued, fascinated, or simply desperate for something to do, go to Settings, then Labs where you will find 49 easily enabled features and enhancements.

Have fun and happy Gmailing!

Mr. Modem (Richard Sherman) *is an author, syndicated columnist, radio host, and publisher. "Mr. Modem's Weekly Newsletter" provides personal responses to subscribers' computer and Internet questions, plus weekly computing tips, Web site recommendations, virus alerts, hoax warnings, and more. For additional information, visit* **www.MrModem.com**.

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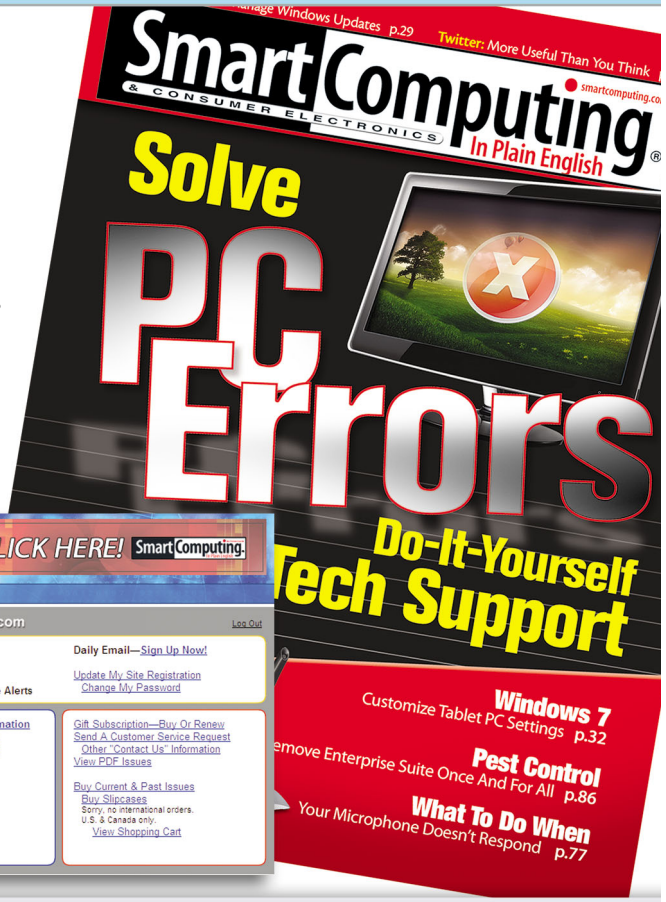
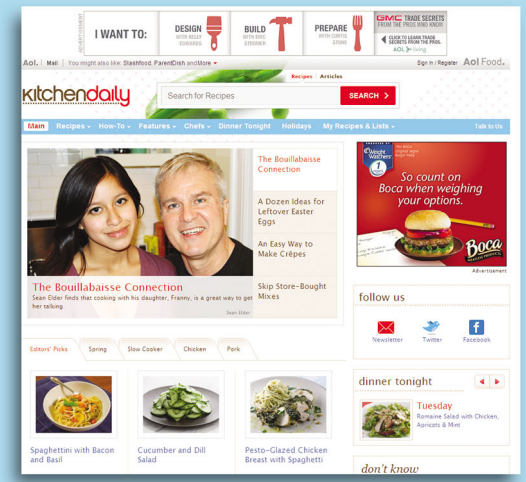


Smart Computing's Fun Site Of The Day

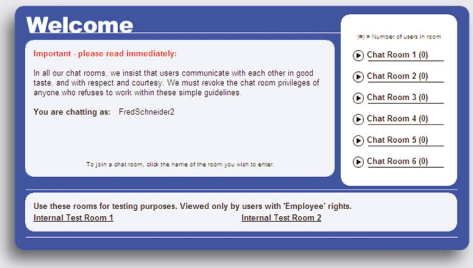
KitchenDaily

This cooking Web site (www.kitchendaily.com) aims to "help you put dinner on the table seven nights a week." You'll find recipes, tips, and instructional videos that will help make life a little easier in the kitchen. Check it out to learn a new quick recipe, brush up on your egg preparation knowledge, and more.



Chat Room

Have a problem you can't seem to solve? Connect with fellow *Smart Computing* subscribers to talk through it in our chat room. Click Computing Chat Room at www.smartcomputing.com to get started.



Ethernet

This month in 1973, Robert Metcalfe began developing Ethernet. According to the *Smart Computing* Encyclopedia, "It all started at Xerox PARC (Palo Alto Research Center) in 1973, when Metcalfe was asked to develop a network system for the world's first laser printer."

Mother's Day

We here at *Smart Computing* like our moms. In honor of Mother's Day (May 9), we did a search of mom-related terms on our Web site. "Mother's Day" turned up 33 times, "mom" appears 251 times, and "flowers" appears 193 times.

Stop, Drop & Troubleshoot

PC Problems? We Have Your Back

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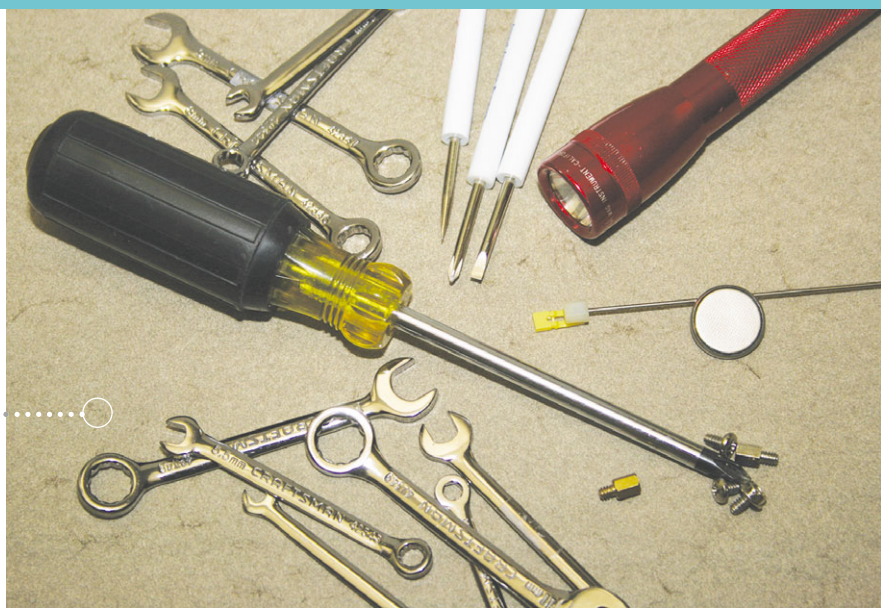


Search engines, product manuals, and diagnostic software are every bit the troubleshooting tools as the physical specimens shown here.

There goes the evening. Or the working day. Or the entire weekend.

For many of us, a computer problem comes with a sinking feeling. It's as though we instinctively realize that we're not going to get as much done in the near future as we had hoped.

If you use your computer for business, or you're working on a personal project that can't wait, a persistent problem or error message can derail your productivity until you solve the trouble. These days, there's quite a bit of work and play that you just can't do without your PC. Getting it back to normal can suddenly become your main focus for the foreseeable future, no matter what else you had planned.

Sometimes troubleshooting is a snap: You simply reverse the last change you made to your PC, and all is well. At other times, however, the process can be a bear all around. When this frustrating situation occurs, we can all appreciate a helping hand.

On the bright side, you already have a couple of things going for you. You're reading *Smart Computing*, which indicates that you're a hands-on type of user who's interested in making your PC run the best it can—or at least as well as it did before it started to act up.

The other spot of good news is that you're reading this particular issue. Turn the page, and you'll leap straight into this month's feature package, "Top PC Errors." It's not only about identifying what's gone wrong with your computer, but also about how to fix it. You'll find top tips in an easy to understand question and answer format to help you solve common problems.

Break It Down

First on our list of topics is the type of trouble that arguably pops up the most often. "Software Errors" deals with errors you encounter while running programs. When an application doesn't do what it's supposed to do, or crashes outright, this article gives you a great place to start working on the problem.

We singled out one type of software for its own article. Browsers, our windows to the Web, are different from other programs because they enable us to do so much in the online world. They also come into contact with many types of data, and we expect them to be able to handle whatever we come across. Naturally, not everything works as it should at any given moment, and so we present "Browser Errors" to lend you some assistance when Murphy's Law strikes.

Occasionally, a physical part of your computer will wear out due to age or too much heat. Others meet a tragic fate on the receiving end of an electrostatic shock or a fall from a desk. Still other devices have problems interacting with everything else because of a faulty driver (set of software instructions).

Hardware errors can be easy to fix but costly. In the meantime, they can make your operating system and apps misbehave. Check out "Hardware Errors" for more info on typical repairs.

Finally, in "Troubleshooting Tools," we'll talk about how to do research on a specific problem using one of the best problem-solving tools there is: the Internet. We'll also get into the tech support options available to you.

Save Money & Time

Don't worry about whether you find troubleshooting "fun"—most people don't. On the other hand, it's very satisfying to have successfully fixed something. And at the end of the day, many of us would rather rectify an issue on our own than pay a repair shop to do it.

One thing that's important to bear in mind, especially when you're under pressure to correct an issue quickly, is that some problems are less time-consuming to fix by the rather drastic step of reinstalling your operating system and applications. Only do this if you're certain that you have all of your personal files backed up and that you have each application's installation media and activation key, if applicable.

BY MARTY SEMS

Software Errors

Exterminate Common Bugs

Unfortunately, error messages don't often make much sense, and it's usually impossible to fix a problem when you're not even sure what the issue is. Below, we've compiled some common error messages and other software-related problems to help you solve some of your most aggravating dilemmas.

Update Your Software

Before we get into error message specifics, it's worth noting that, oftentimes, installing a simple update may fix an error message. After all, one of the main reasons for issuing software updates is to fix software bugs that cause performance issues and error messages.

The exact update procedure varies depending on the program in question. Regardless of the program, however, the first step is to determine whether an update is available, and to do that, you need to know which version you're running. In most applications, clicking About in the Help menu should identify the application version you're running. In some instances, the About pop-up may even tell you whether an update is available or include a button that allows you to check for available updates. (Alternatively, there may be a Check For Updates option in the Help menu.) If there is no option to at least check for an update, you'll have to go to the application's Web site and compare the current version number to the version you're running.

Automatic updates are the easiest for the user, and this process is becoming increasingly popular. Perhaps the best known example is Microsoft's Windows Update feature, which looks for and installs new updates. Microsoft is not alone. Google applications, such as Google Chrome or Google Earth, regularly update in the background, often without the user's knowledge. Firefox checks for new versions and downloads any updates when it's open. If it finds and downloads an update, it offers to install the update the next time you open Firefox.

Some software developers, such as Apple, include a separate utility with their applications that occasionally checks for software updates and prompts you when new updates are available. Installing the new updates is as simple as clicking a couple of checkboxes and clicking an Install button.

On the other end of the spectrum are applications you have to manually install. You'll install these updates just like you install a new application. Download and run the installer from the Internet. The installer will guide you through the rest of the upgrade process (which may require closing the application if it's running in the background). Generally, there is no need to uninstall the old version before installing the update.

Problems & Errors

If an update doesn't solve your problem, you'll need to explore other options. Next, we'll focus on specific error messages and problems along with their solutions.

Problem: You've installed a Nero plug-in for burning CDs in Windows Media Player 11. Unfortunately, when you use this plug-in, Windows Media Player freezes at random times.

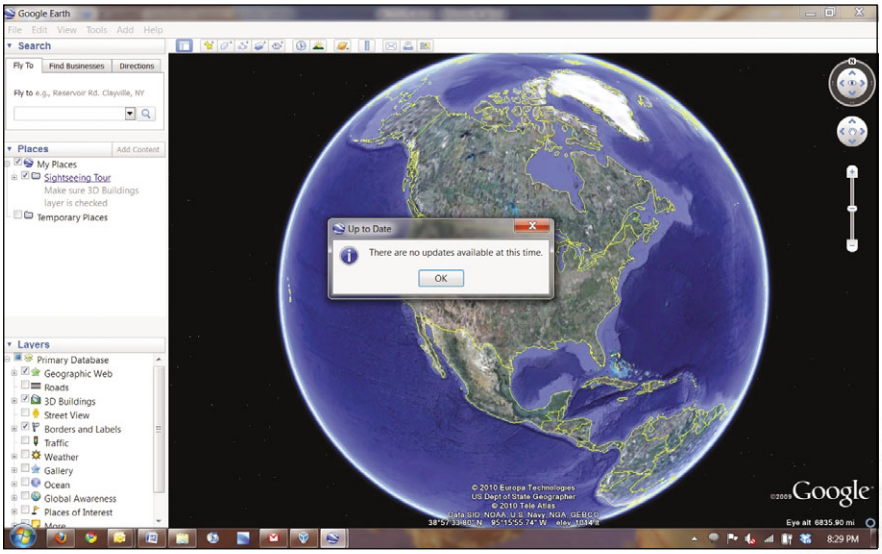
Solution: The problem is that the Nero plug-in is not compatible with Windows Media Player. Microsoft, however, has issued a hotfix to correct the problem. You can download the hotfix at support.microsoft.com/kb/935957. Scroll down and click the Download The WindowsMedia11-KB935957-x86-INTL.exe Package Now link. The file does not contain any actual programming code, it just removes a couple of lines from the Windows Registry to correct the problem.

Problem: You're running Word 2007 on a Windows Vista PC and after installing an update, you experience one of the following issues: The mouse doesn't work in Word; you can't open

a Word document from the Start Search box or using the Windows Desktop Search; or Word crashes when starting, closing, trying to open a document from within Word, or trying to save or close a document.

Solution: The problems appear to stem from a Word 2007 update installed on a Vista PC. If Word is running when you restart the PC after installing the update, you may experience the above problems.

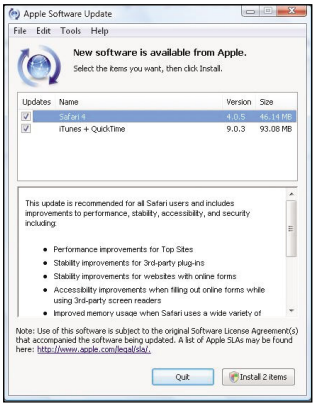
Microsoft has an automated fix for the problem at tinyurl.com/yf6zewl. Scroll down and click the Fix It graphic to download an automated fix. Save and run the automated fix and follow the instructions provided. For more information, visit support.microsoft.com and search for article 940791.



Applications, such as Google Earth, may have an option to check for updates online. Like most Google applications, however, Google Earth is constantly checking for and installing updates.

Error Message: Cannot start Microsoft Office Outlook. Cannot Open the Outlook window. The set of folders cannot be opened. The information store could not be opened.

Translation: Outlook 2007 is searching for a user profile in your Registry settings. This error can occur when the Registry key is missing or corrupt, but it usually results from running Outlook 2007 with compatibility mode set to Windows 95 or Windows 98/Windows Me. This is because older versions of Windows kept the profile information in a different location within the Windows Registry. Other error messages that relate to this problem include "No profile has been created;" "The list of profiles cannot be loaded. An unexpected error has occurred;" and "Unable to open the Outlook window."



Not all applications require you to manually download the latest version from the Internet. The Apple Software Update allows you to keep all your Apple software current, including iTunes and QuickTime. Click any application updates you want to install and click the Install button.

Solution: First, check to make sure you're not running Outlook 2007 in compatibility mode. Navigate to C:\PROGRAM FILES\MICROSOFT OFFICE\OFFICE12, right-click Outlook.exe, and click Properties. Click the Compatibility tab and clear the checkbox next to Run The Program In Compatibility Mode For. Click OK and see if you can start Outlook.

If this doesn't solve your problem or Outlook isn't set to run in compatibility mode, you can fix the problem automatically using an automated tool from Microsoft found at tinyurl.com/l2euof. Scroll down and click the Fix It button, save the file, and run it when the download is complete. Follow the prompts.

Problem: When starting Outlook 2007, you receive a UAC prompt asking permission to run Outlook.exe.

Solution: This is often a problem involving compatibility settings and may be an issue after fixing the previous problem. Open Computer in the Windows Start menu and navigate to C:\PROGRAM FILES\MICROSOFT OFFICE\OFFICE12. Scroll down, right-click Outlook.exe, and select Properties. If Read-Only is checked in Attributes under the General tab, you can leave it checked for now. Select the compatibility tab if selected and make sure there's no check next to Run The Program In Compatibility Mode For or Run As Administrator. If this doesn't solve the problem or there is no Compatibility tab, remove the check next to Read-Only in the Attributes tab and click OK. Right-click Outlook.exe again and select Properties. You should see a Compatibility tab. Once compatibility options have been set, you can set the Outlook.exe file as Read-Only.

Error Message: Setup has determined that your configuration does not support any of the included products.

Translation: This error message may appear if you're trying to install Roxio Creator 2010 in Vista or Windows 7. It is typically caused by not having Service Pack 1 installed in Vista or trying to run the installer in compatibility mode. Note that Creator 2010 is not compatible with Windows XP and older versions of Windows.

Solution: If you're receiving this error message in Vista, make sure you have Service Pack 1 installed. You can use Windows Update to install SP1, or you can download it directly from Microsoft at tinyurl.com/32z6vj.

If you're running Win7, check to see if you're trying to run the installer in compatibility mode. Click Computer in the Start menu and browse to and right-click the installer. (This could be on CD if you purchased a physical copy or on your hard drive if you chose to download the software from Roxio.) Click Properties and select the Compatibility tab. Remove the check next to Run The Program In Compatibility Mode For. Click OK and try to run the installer again.

Top Problem

Apple's iTunes software is one of the most popular media applications available, but even it doesn't always play well with Apple's iPods.

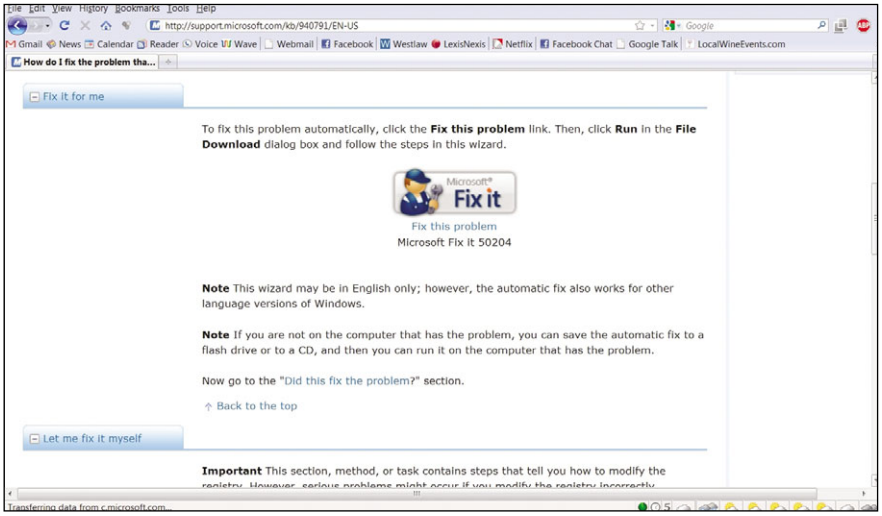
Error Message: An unknown error occurred (13019).

Translation: This error message usually appears when trying to sync an iPhone or iPod touch running OS 3.0 with iTunes. Although this error is more likely to appear when syncing music between iTunes and your device, it may also appear when syncing other information, such as applications or podcasts.

Solution: Here, again, an update might be able to help. If you're running an older version of iTunes, try upgrading to the most recent version using Apple Software Update Utility, which you can find by clicking Start and All Programs. This utility will list all available updates for Apple software on your PC, including iTunes.

However, an update won't always solve this problem. If you're already running the current version of iTunes or the update doesn't resolve the problem, open iTunes and select your iPhone or iPod touch under Devices. Click the Music tab and click Selected Playlists in the Sync Music option. Finally, make sure the Voice Memos playlist is not selected and click Apply.

If this doesn't resolve the problem, you'll need to search the device and your iTunes Library for duplicate voice memos. If you find a duplicate voice memo, delete it and try to sync. If the error persists, open the iPod touch or iPhone in iTunes under Devices and deselect the Sync Music option on the Music tab. Sync your device and then re-enable the Sync Music option. If you're receiving error messages when syncing other information, disable the sync option on the relevant tab.



For many problems, including various issues with Word 2007, Microsoft has automated fixes available at its Web site (support.microsoft.com). These are small downloads that can quickly and safely resolve various errors.

Error Message: Cannot open file. The QDF file is from a later version of Quicken.

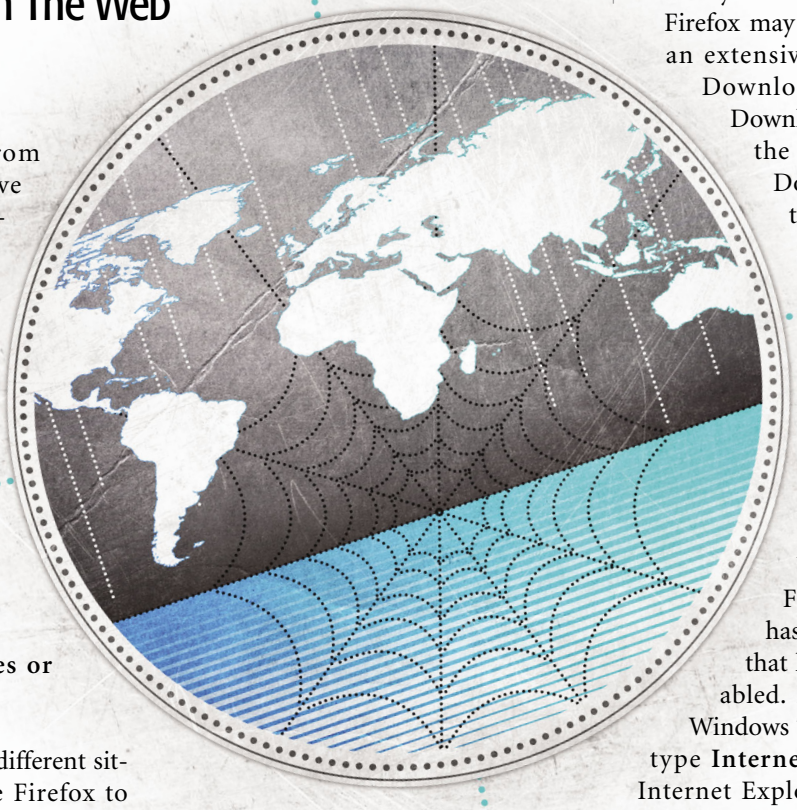
Translation: This error message might appear when you reinstall Quicken 2008. The problem occurs when you've created a data file using a newer version of Quicken 2008 (R2 [Release 2], for instance) and then reinstall R1 (Release 1). Unfortunately, R1 cannot open data files created by R2.

Solution: The solution to this problem is to manually update Quicken 2008 to the latest release. To download the update, go to tinyurl.com/ykm6krb, scroll down to step one, and click the Click Here link. Save the file and run it when the download finishes and then follow the prompts. ▮

BY CHAD DENTON

Browser Errors

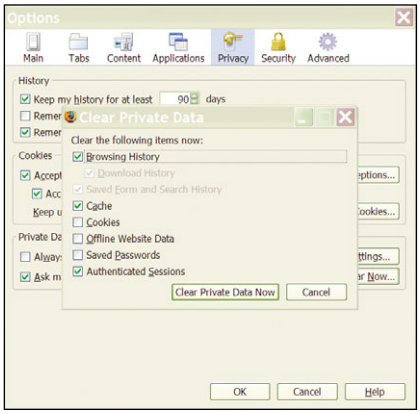
Don't Get Stuck In The Web



A recent study from Harris Interactive found that the average American uses the Internet around 13 hours a week. Much of your Web time is spent using a Web browser, so it can be aggravating when your browser begins to display errors or have problems. In this article, we'll help you resolve the most common Web browser issues.

Problem: Firefox freezes or seems unresponsive.

Solution: There are a few different situations that could cause Firefox to hang. Freezes most commonly occur when you have Web pages open for a long period of time or when you run the Web browser with multiple tabs open for an extended period of time.



If Firefox is having trouble starting, it's a good idea to delete your Download History, especially if you haven't done so in awhile.

Firefox may be forced to delete some of its memory cache when too much information is stored.

Mozilla has indicated that the problem is generally worse if you've installed and are actively using plug-ins, extensions, and themes for Firefox. Try updating the Firefox add-ons, because newer extensions typically require less memory. Mozilla's Plugin Check tool (www.mozilla.com/en-US/plugincheck) can help you make sure all your plug-ins are up-to-date.

A corrupt add-on may also cause Firefox to freeze when you exit the Web browser. Disable the extensions one-by-one. Click the Tools menu, select Add-ons, choose an extension, and click the Disable button. Once you have disabled all the add-ons, restart Firefox and enable the add-ons one-by-one until you discover which extension is causing the problem. You can also use the window to uninstall Firefox plug-ins, extensions, and themes you no longer use.

Firefox may also freeze if you have an extensive list of files in your Download History. Clear the Download History by clicking the Tools menu, selecting Downloads, and clicking the Clear List button.

Problem: Internet Explorer won't start.

Solution: Similar to freezes in Firefox, IE (Internet Explorer) may have an issue with an add-on that's preventing the Web browser from starting. Fortunately, Microsoft has built in a version of IE that loads with add-ons disabled. In Windows Vista and Windows 7, click the Start button, type **Internet Explorer**, and click Internet Explorer (No Add-ons). If you run Windows XP, click Start, Programs, Accessories, System Tools, and Internet Explorer (No Add-ons).

If IE starts, disable the add-ons you've most recently installed. In Vista and Win7, click the Start button and type **Internet Options** into the Start Search box and press ENTER. (In WinXP, select Start, Control Panel, and Internet Options in Classic View.) Select the Programs tab and click Manage Add-ons. Click the File Date field to see which add-ons you've most recently added. Right-click the add-on and select Disable. If IE is able to start normally with the most recently added extensions disabled, you may need to uninstall and reinstall the add-on, assuming you want to continue using it. Most add-ons can be uninstalled using the Add Or Remove Programs or Uninstall A Program tool. You can visit the software creator's Web site to

download a new version of the application or plug-in.

Problem: Safari quits unexpectedly.

Solution: First, Apple suggests that you ensure Safari is up-to-date by starting Apple's Software Update Tool. Next, click the Settings menu (the gear icon in the upper right of the browser window), choose Preferences, select the Security tab, and remove the check mark from Enable Plug-ins. If Safari no longer quits without warning, you can remove the most recent plug-in you installed. Open Windows Explorer, double-click the Program Files folder, double-click Safari, and open Plugins. Right-click the plug-in you want to remove and click Delete.

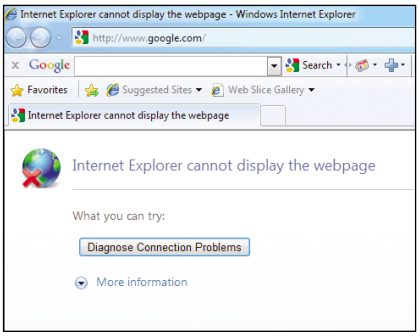
The Reset Safari feature is ideal when Safari is having trouble surfing the Web.

If the errors continue, Apple recommends that you reset Safari, which will return the settings to a state similar to when it was originally installed. Click the Settings menu and select Reset Safari. From the Reset Safari window, you can choose what settings, such as Empty The Cache or Clear The Downloads Window, you want to delete. Note that no matter what settings you choose, your bookmarks will remain.

Error Message: Internet Explorer cannot display the webpage.

Translation: This error occurs when IE is unable to connect to the Web server of the URL you entered. There are a number of possible explanations for the problem, ranging from the lack of an Internet connection to a Web server that's temporarily offline.

Solution: Because there's a wide range of possible problems, it's best to start by seeing if IE can open another Web page, such as www.google.com or www.msn.com. If you don't see any error messages, it's likely that the Web site you were trying to access is temporarily offline, so you should try back another time. If you can't access any Web sites, check to see if there are problems with your network by running the Diagnose Connection Problems tool that appears on the Internet Explorer Cannot Display The Webpage error message. IE will indicate if it was able to find a problem and provide tips about what you can do to fix the issue.



If you see this error message, you have a bit of troubleshooting to do to resolve the problem.

To overcome network issues, begin by resetting the modem for your DSL, cable, or satellite Internet connection as well as the network router. Resetting these devices is as simple as disconnecting the Ethernet cables and turning off the modem or router. Wait a few seconds, reconnect the cable, turn on the devices, and reboot your computer. You should see a symbol in the Notification Area that indicates your computer is connected to the Internet. If not, get in touch with your Internet service provider about fixing your service issues.

Error Message: Internet Explorer has encountered an error and needs to close. We are sorry for the inconvenience.

Translation: Unlike some applications that crash without warning, IE lets you know that it's having a problem before it crashes. Typically, you can restart IE, and it should work fine.

Solution: In some cases, IE may deliver this error message each time you visit a given Web site. A corrupt file for the Web site in IE's browser cache can cause the problem, so you should delete temporary Internet files. To do so in IE8, click the Tools menu, select Internet Options, and click the Delete button under Browsing History on the General tab. In the Delete Browsing History window, select the Temporary Internet Files and Cookies checkboxes. Click the Delete button, and IE will delete the temporary files IE keeps to retain your preferences and cache viewed content.

Using an older version of IE, such as IE6 or IE7, may also cause the browser to crash when visiting Web sites that aren't optimized to work on the older platforms. Thus, it's a good idea to upgrade to IE8 if you're experiencing seemingly random browser crashes. You can install the latest version by installing all your Windows Updates or by visiting Microsoft's download page for Internet Explorer 8 (tinyurl.com/ygxkklf).

Error Message: Host Unavailable.

Translation: This is Internet Explorer's way of telling you that the Web server isn't communicating with your PC.

Solution: Click the Refresh button or press F5 on your keyboard to try to reload the Web page. If the error pops up again, it's likely that the Web site is down momentarily. Web administrators often take Web pages offline for maintenance, so if you try checking back at a later time, the Web site will probably be available.

Error Message: Your current security settings prohibit running ActiveX controls on this page.

Translation: You may see this error when your Web browser has been set to use high security settings and you visit a Web site that requires an ActiveX control to display content. ActiveX controls are small applications that provide interactive or enhanced functionality. However, ActiveX controls are also some of the most popular methods for viruses and hackers to access your PC, because people often allow their Web browser to automatically accept the ActiveX programs.

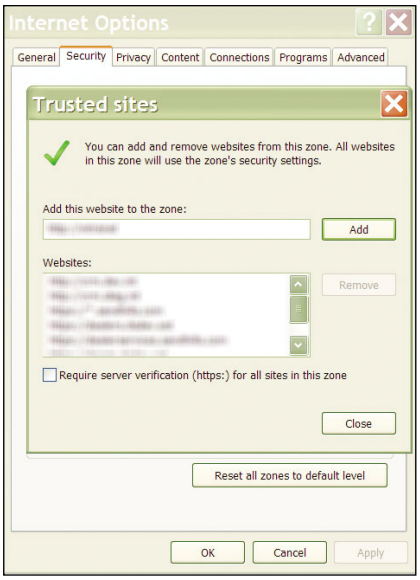
Solution: If you believe the Web site to be trustworthy, you can add it to IE's Trusted Sites list, which lets you maintain your high security standards and still allow the Web site's ActiveX controls. Click the Tools menu, select Internet Options, and choose the Security tab. Click the Trusted Sites option under Select A Zone To View Or Change Security Settings and click the Sites button. Enter the URL of the Web site in the Add This Website To The Zone field, click the Add button, and select Close. Next, click the Custom Level button, scroll down to the ActiveX Controls And Plug-ins, and change the ActiveX settings (Run ActiveX Controls And Plug-ins and Download Signed ActiveX Controls) to Enable or Prompt, rather than Disable. Click Apply to change IE's settings.

Error Message: Install The Latest Version Of Adobe Flash Player.

Translation: You're likely to see this error when you attempt to play a video through your Web browser.

Solution: You probably need to download and install the latest version of Adobe Flash Player (find it at get.adobe.com/flashplayer). Otherwise, the error is caused by security settings that block active scripting of Java applets that may be necessary to play back Flash content. To fix the issue, open your Web browser and enable the JavaScript Options. To do so in IE, select the Tools menu, click Internet Options, select the Security tab, and click the Custom Level button. Scroll down the listings to the Scripting category, and under Scripting Of Java Applets, select Enable. Click OK and close down Internet Explorer. When you restart, you should be able to play the video.

If you run Firefox, click the Tools menu, select Options, and choose the Content tab. Make certain the Checkbox next to Enable JavaScript is checked. Then, click the Advanced button and mark the checkboxes for the scripts you want to allow. The typical scripts for movies include the options for Move Or Resize Existing Windows and Disable Or Replace Content Menus.



If you want to enable an ActiveX control but keep your high security level, add the Web site to Internet Explorer's Trusted Sites zone.

Problem: I'm trying to watch a video online, but all I see are the QuickTime logo and a question mark.

Solution: Older versions of Apple's QuickTime made QuickTime the default player for Flash file formats, rather than Adobe's Flash Player. The difference between the two is that Adobe's Flash Player is designed to handle all Flash formats, while QuickTime's player only works with some of the Flash formats. In the most recent versions of QuickTime, Apple removed support and default playback settings for Flash video. To download the newest version, visit tinyurl.com/4gjss or run Apple's Software Update. ❚❚

BY NATHAN LAKE

Top Problem

Error Message: 404 Not Found.

Translation: This error indicates that your computer was able to reach the server of the URL you entered, but the Web server was not able to find the Web page you entered. It's one of the most common error messages you'll see, because it often pops up when a Web page is temporarily down for service or if the URL you entered is slightly off. It may also appear as The Web Page Cannot Be Found.

Solution: First, double-check that you've correctly typed the URL into the Address bar. If a link from another Web site has directed you to the page, the link may be old and that particular URL may not currently be in use. Try entering only the first section of the URL, such as www.smartcomputing.com, rather than the entire address to see if the host server is working. If you reach the Web site's parent directory, you may be able to locate the Web page you're looking for.

Hardware Errors

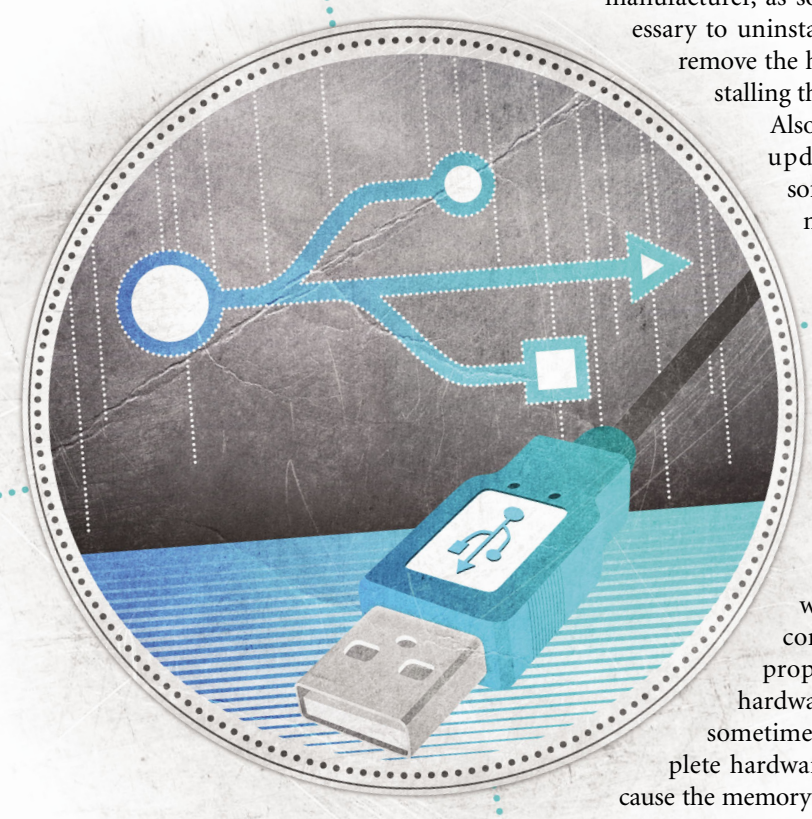
Solve Common Peripheral Problems

PC hardware and peripherals perform many disparate tasks, but they all have one thing in common—at some point, they'll fail to work properly. There are so many hardware errors and problems we couldn't possibly cover them all in one article, so we've focused on the errors and problems that are most likely to vex you. Before we get into that, however, it's important to know a few first steps to take that can solve most hardware problems.

Update Drivers & Firmware

A driver is a program that lets Windows communicate with your computer's hardware. New drivers can fix bugs, make hardware run faster or more efficiently, and even add new features. Keeping all your drivers up-to-date is an important aspect of heading off hardware problems.

The main problem with drivers is that they are often specific to a particular make, model, and sometimes revision number of hardware. You must download and install exactly the drivers you need or they'll cause even more problems. Check the documentation that came with your computer to find this information before downloading any drivers. Be sure to install any drivers you download using the precise instructions provided by the manufacturer, as sometimes it is necessary to uninstall an old driver or remove the hardware before installing the new driver.



Also look for firmware updates. Firmware is software installed on a memory chip inside a hardware device that dictates how the hardware operates and what features it supports. Everything that we said about drivers also applies to firmware. Applying the wrong firmware or applying the correct firmware improperly can cause the hardware to malfunction, sometimes requiring a complete hardware replacement because the memory chip that stores the firmware stops responding to commands, so be sure to follow the installation instructions to the letter.

Common Hardware Problems & Errors

If you know your drivers and firmware are up-to-date, it's time to take a closer look at hardware-related issues.

Problem: When I print things from any application, there is no error message, but nothing prints.

Solution: Look for a Printer icon in the System Tray and double-click it. If you see a bunch of print jobs listed, it means the computer queued them up but was unable to send them to the printer. This often means the printer is off or is offline, so check the manual to see how to turn it on and bring it online so it can accept jobs. Sometimes it means the printer is installed but disconnected, so check the cable connection, as well.

If you don't see a Printer icon, the likely problem is that you're accidentally sending print jobs to a software printer designed to turn print jobs into faxes or PDF (Portable Document Format) files. To solve this in Windows XP, click Start and click Printers And Faxes. In Windows Vista, click Start, Control Panel, Hardware And Sound, and Printers. In Windows 7, click Start and Devices & Printers. Right-click the printer you want to use and click Set As Default Printer.

After setting the default printer, check the print settings in the programs you use to make sure they are sending print jobs to the correct printer. You can often find these settings in the File menu.

Problem: My wireless media player (PlayStation 3, Xbox 360, Apple TV, etc.) doesn't play video with the highest quality streaming or drops to a lower quality setting during playback. My other wireless devices (digital audio players, laptops, etc.) also have slow or intermittent connections to the Web.

Solution: Wireless networks are finicky, and the first thing to try, if possible, is moving your wireless router closer to the equipment that is having trouble. Also check to see if all your wireless equipment supports and is using the same wireless transmission protocols. If you have an older router that only supports the 802.11b standard, upgrade it so it supports 802.11g at minimum or 802.11n (often called Wireless N) for the highest wireless speeds. Note that if the equipment you use for streaming has older wireless hardware, it won't gain any benefit when you use it with a faster wireless router.

If video sometimes streams well but has intermittent issues, try unplugging the router's power cord, waiting 10 seconds, and plugging it back in. This sometimes irons out problems when the router re-establishes connections to the problematic hardware.

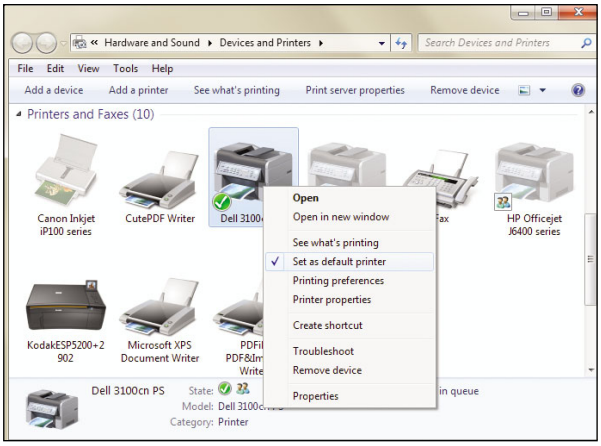
Wireless home networking is so popular that sometimes interference is the problem, and you can solve it by switching your router to a different channel using your Web browser. Refer to the router's documentation for the specific steps, and if there's an option to scan all the channels to see which ones other routers are using, be sure to run the scan and pick a channel that is empty.

Products such as the Belkin Mini Surge Protector With USB Charger ($24.99; www.belkin.com) are good for charging USB devices when you are away from your computer.

Problem: I use an LCD monitor, and text is fuzzy.

Solution: Monitors create images using a grid of colored dots called pixels (picture elements), and LCDs fall into the category of fixed-pixel displays, so they look their best at one specific resolution. Resolution is the measure of horizontal and vertical rows and columns of pixels, so when you see a number such as 1,920 x 1,080 it means the display is 1,920 pixels wide by 1,080 pixels high. If you set the resolution to a lower setting than that, the image is stretched to fill the remainder of the screen and becomes fuzzy, with text looking exceptionally bad.

Look up the display's native resolution in the manual and set it to that. To do this in WinXP, right-click the Desktop, click Properties, select the Settings tab, and use the Screen Resolution slider. In Win7 and Vista, first right-click the Desktop, click Personalize, and click Display (Display Settings in Vista), Then, in Vista, adjust the Resolution slider and click Apply. In Win 7, click Adjust Resolution and use the Resolution drop-down box to select the native resolution and then click Apply.



Selecting the right default printer can save a lot of printing headaches.

Problem: When working in Windows, most programs work fine, but when editing video or playing 3D games, there are many graphical glitches, and sometimes the program or even the PC crashes.

Solution: This may seem like a software problem, but it's likely hardware-related. Video editing and 3D games and applications require a lot of processor and video horsepower, so your PC hardware kicks into high gear when those types of programs run. All the extra work the hardware does generates a lot more heat than usual, and if it gets hot enough, the processor, video card, or other hardware can overheat, causing all sorts of errors or even permanently damaging the hardware.

First check the fans, including all fans in the computer's case and the one attached to the processor and video hardware (if any). If you open up your computer's case, power down and unplug the machine first and touch a metal portion of the case to ground yourself. If the fans are clogged with dust and pet hair, use compressed air to

clean them out and see if that helps. If any of the fans don't spin, you'll need to replace them. If you'd like to do it yourself, see "How To Install Fans & Fan Controllers" on page 86 of the July 2009 issue of *Smart Computing*. Look at the path that air takes from the front fan, past the card, and out the back of the system and check to see if any large cables are choking off the airflow. If so, move them gently out of the way and use a plastic or Velcro cable tie to secure them, making sure they didn't detach from whatever they were connected to in the process.

Don't be tempted to run the computer with the case open to improve cooling, as that actually makes things worse. More dust makes its way into the case, and the fans can't do their job of whisking cool air through the case and expelling hot air when the case is open. If the video hardware continues failing in 3D programs, there's no choice but to add a video card to the system if it has integrated video hardware or replace the video card if the computer already has one. Similarly, if your processor has overheated due to cooling issues, you may need to replace it, as there's no way to fix one once it's damaged.

Problem: When I attach a USB device that should come from the computer, it doesn't.

Solution: You can't tell it just from looking at them, but some USB ports are powered and can send electricity to attached devices to charge them, and some ports aren't powered and are used solely for communicating with devices (and can't charge them). Try attaching the USB device to a different port, as some PCs come with both types of USB ports. If you are attaching the device to a USB hub, which splits a single USB port into several ports, make sure the hub has its own power supply or charging won't work. Some keyboards also have USB ports built in, but most of them aren't powered, so you'll have to connect the device directly to a powered PC USB port to charge it. Another option is to purchase a standalone USB charger that plugs into a wall socket.

Top Problem

Problem: Windows doesn't recognize an attached USB device.

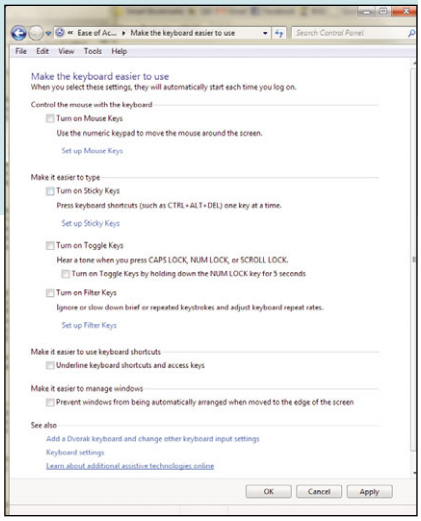
Solution: If the device has its own power supply, turn it on before plugging its USB cable into the computer. If that doesn't work, try another port, and if that still doesn't work, try another USB cable. A final option is to make sure your USB drivers are updated (check with your computer manufacturer for those) and then uninstall the USB ports so Windows can reinstall them using the new drivers. To do this, download and install the new drivers and then access Device Manager. Do so in WinXP by clicking Start, right-clicking My Computer, clicking Manage, and clicking Device Manager. In Win7 and Vista, click Start, right-click Computer, click Properties, and click Device Manager. Expand the Universal Serial Bus Controllers entry, right-click the first entry there, and click Uninstall. Repeat this for every other entry and then reboot the computer so it will automatically detect and reinstall the USB controllers. (*NOTE: If you use a USB-connected mouse or keyboard, following these steps will temporarily disable them. Restart your PC via the Power button, and usage should be restored.*)

Problem: When I type quickly, the computer doesn't pick up all my keystrokes.

Solution: While this may indicate a defect with your keyboard, often it happens because a Windows accessibility option designed to help disabled users is on. To access these options in WinXP, click Start, click Control Panel, click Switch To Classic View (if necessary), double-click Accessibility Options, and click the Keyboard Tab. In Vista and Win7, click Start, Control Panel, Ease Of Access, Ease Of Access Center, and Make The Keyboard Easier To Use.

The options to look for are Sticky Keys (which uses CTRL, ALT, and SHIFT as toggles instead of making you hold them down when pressing another key) and Filter Keys (which ignores certain keystrokes). Remove the checkboxes next to each and click Apply.

Another possibility is that your wireless keyboard is too far from its transceiver. Check to make sure the transceiver hasn't fallen from your desk.



Win7 has an excellent integrated hardware troubleshooter.

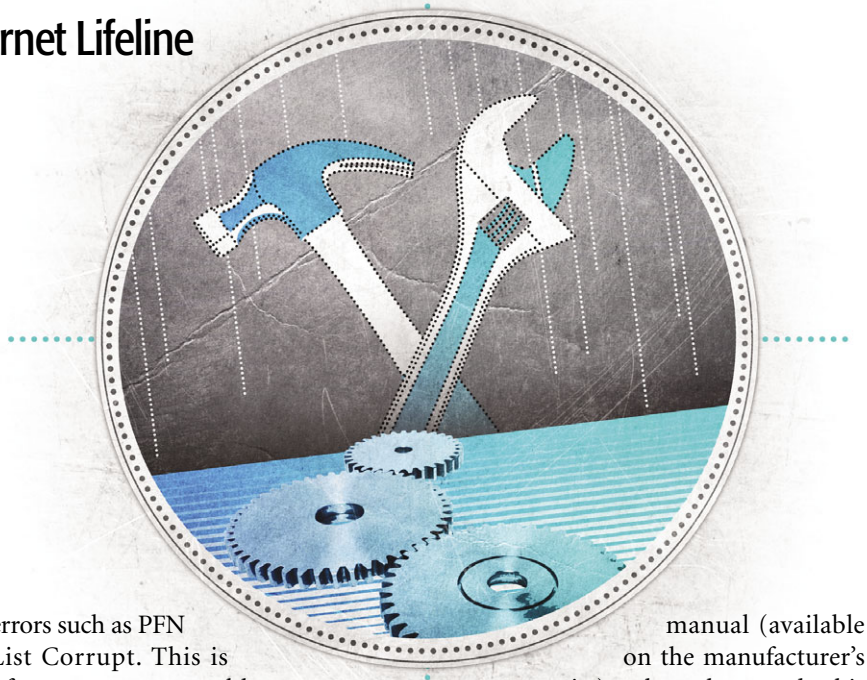
Wizards Work Magic

If all else fails and you have Win7, don't overlook the Hardware And Devices troubleshooter that guides you step-by-step through a troubleshooting session. To access it, click Start, type **troubleshooting** in the Start Search box, and press ENTER. Go to Hardware And Sound and click Configure A Device to begin the process. There's nothing like having someone else do your work for you, especially if that someone is the very computer you're trying to fix. ▌▌

BY TRACY BAKER

Troubleshooting Tools

The Internet Lifeline



Ironically enough, when your computer isn't working, your best bet for finding a fix is . . . a working computer. More specifically, your best bet is to have a working computer that can go online. Whether you have to borrow a laptop from a family member or slate some desktop time at a library, it's worth the effort.

An Internet connection gives you access to potential solutions to your problem, scanning and diagnostic services, and update downloads as needed. There might be email or live chat tech support available from the manufacturer if your computer, program, or gadget is under warranty. You'll also find users manuals, should you lack a printed or CD copy for a device or application.

Of course, *Smart Computing*'s own Tech Support Center (www.smartcomputing.com/techsupport) can be a major resource when subscribers need assistance, too. And for those times when you're unable to go online, there's our SmartPeople Computer Support at (800) 368-8304. Our crack staff mans the phones from 8 a.m. to 8 p.m. CST Monday to Friday to help get your system back on its feet.

Let's have a look at what the Web can do for you when your PC is acting up.

Manufacturer Sites

Computer trouble generally boils down to an issue with software, hardware, or the operating system. In most cases, the developer or manufacturer has a Web presence you can browse to when you need help.

For example, say your new PC is spontaneously rebooting or producing errors such as PFN List Corrupt. This is often a memory problem. That said, even if a diagnostic utility such as Memtest86+ (www.memtest.org) discovers RAM malfunctions, there's a chance that the memory sticks might be incorrectly configured in the BIOS instead of defective.

To test this theory, shut down your PC and open the side panel. If the memory is labeled with the name of its manufacturer and part number, point your browser to the vendor's Web site. In the support or product information section, you should be able to look up the RAM's specifications for voltage, such as 2.1V, and timing settings, such as 5-5-5-15-2T. (These numbers indicate how many clock cycles the memory waits between certain operations that affect performance and stability.)

Armed with the memory manufacturer's specified voltage and timing settings for your particular RAM, enter your motherboard's BIOS setup to verify that your PC is set to those figures. Consult your motherboard's users manual (available on the manufacturer's site) to learn how to do this and save your changes, if any. The manual may also tell you which memory slots the RAM should be installed in for best results.

Another possibility is that there is some sort of incompatibility between the motherboard and the RAM. Again, visit both manufacturers' sites. The motherboard company's site might provide a list of supported RAM for your particular board, while the memory vendor's site might list known issues along the same lines.

Be aware that you may not be able to get official tech support for free software. That may hold true whether the application is from an established company or a lone developer. The same goes for an old product—and "old" in the computer and electronics industry can mean as little as a year old in certain cases. If a program or device is EOL (end of life), meaning it's no longer being manufactured, or if the vendor has gone out of business, you may need assistance from third

parties or other users. Fortunately, the Web can help you there, too.

Search Engines & Other Services

Google (www.google.com), Bing (www.bing.com), and other search engines can sometimes guide you to a solution to your problem much faster than a manufacturer's support page. Type in some carefully chosen keywords, such as **Windows 7 PFN List Corrupt**, and you'll probably find links to forum posts, support articles and bulletins, and possible remedies.

Two pieces of advice: Number one, bundle your phrases to narrow down the results you'll get. For instance, on SmartComputing.com's Article Search page (www.smartcomputing.com/editorial/asearch.asp), click Exact Match under the search field. For most search engines covering the entire Web, put phrases in quotes, such as **"Windows 7" "PFN List Corrupt."**

Our other bit of advice is to consider the source of any fix, especially if it deals with deleting files or installing unfamiliar software. Even a well-intentioned user might make a mistake in the Registry edit or other system tweak he recommends.

Another type of troubleshooting help is the free online diagnostic tool. For instance, Trend Micro's HouseCall (housecall.trendmicro.com) can remotely scan your PC for malware, while DSLreports.com's Speed Test (www.dslreports.com/speedtest) can confirm whether your Internet connection has indeed slowed down lately.

Finally, if you bought a new device online and it doesn't work properly, you may be able to return it for a replacement or refund through the seller's Web site. Look for options marked Returns or RMAs (Return Merchandise Authorizations); these might be available in your account settings, the customer support section, or near the invoices of your recent purchases from the company. ❚❚

BY MARTY SEMS

Smart Computing's Q&A Board

Subscribers to *Smart Computing* have several perks, but one of the most useful is our online Question & Answer Board (tinyurl.com/2ht4cn; alternatively, you can click Q&A Board on *Smart Computing*'s home page). Featuring our community of subscribers and moderated by our professional staff, this lively forum is a great place to get free answers to any number of computing questions.

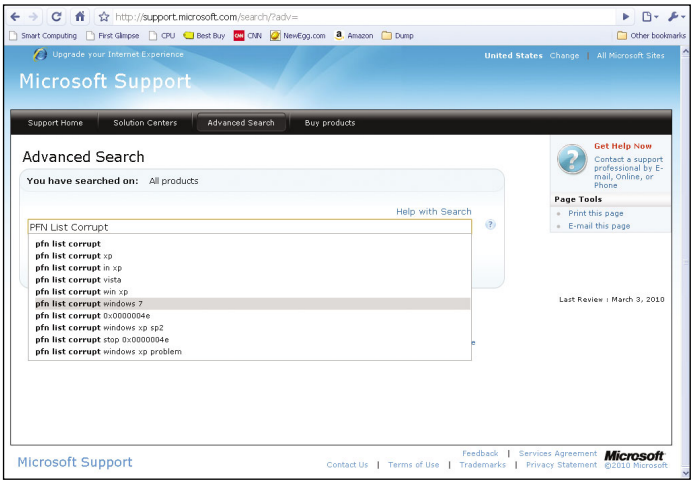
To post a question, first log in to SmartComputing.com with your username and password (click the Forgot Your Password? link if you need to). Next, click Post A Question at the upper-right corner of the Q&A Board. (If you haven't filled out the computer specifications part of your user profile yet, click the Yes, Take Me There Now link. This info will help attract more useful replies to your question.) Type a relevant, brief subject line and your question and click Send.

You'll get the most helpful responses if your question is courteous, concise, comprehensible, and complete. A PC problem can certainly be frustrating, but it pays to take an extra moment to proofread your submission before you click Send. Fewer users will be willing to try to help you if your question is vague or hard to understand.

It may take awhile, but you should start to see responses in a matter of hours or even minutes. You'll know when someone has replied when the View Full Question link says View Full Question and 2 Answers, for example. If no one has responded to your question in awhile, try clicking Edit Me and adding more information. Clarification might help, too; try phrasing your question in a different way.

Other readers post questions all the time, so it's a good idea to mark your question so you can easily find it again. Click View Full Question, and then click Subscribe To This Message. Not only will you be able to click View Subscribed Messages whenever you visit the Q&A Board, but you'll also receive a copy of any answers to those queries in your email inbox.

Later, if you think you can help someone with a question of his own, feel free to use the Click Here To Answer Or Reply link. It may only take a moment to lend someone a hand, and you'll feel almost as good as he does when he types back, "Thanks! It worked!" ❚



Microsoft Support (support.microsoft.com) is a great place to find the company's official knowledge base for Windows PCs.

Quick Studies
How-To

Adobe Photoshop Elements 7

Pencil & Brush Basics

Image Processing

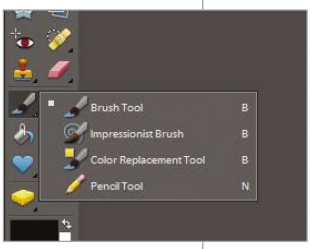
Beginner

Windows XP/Vista

Photoshop Elements offers an array of tools to improve your photos and create new art. This month, let's open up the toolbox and take a closer look at two of the basic painting and drawing tools—the Brush and the Pencil—and see how you can adjust settings to make them work for you.

Tool Time

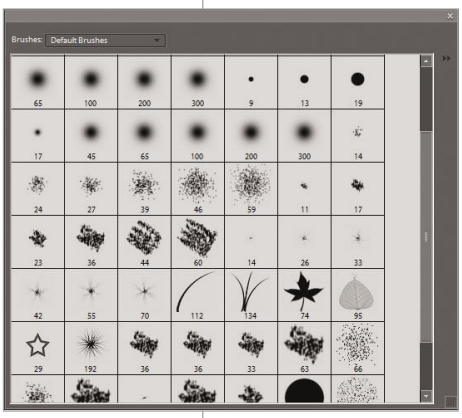
Open up the Editor workspace and click Full, found on the right side of the workspace, above the Palettes space. Now turn your attention to the left side of the workspace, and you'll see the default toolbox, which showcases several sets of tools. The painting tools are toward the bottom of the box. To see a tool's name, place your cursor over its icon. Look around for the Brush tool—not surprisingly, its button has a paintbrush on it.



Elements hides additional tools under a tiny triangle.

The Brush tool keeps a few tools hidden beneath it: the Pencil tool, the Impressionist brush, and the Color Replacement tool. Elements indicates these hidden tools are present with a tiny triangle at the lower right of the button. Right-click the button, and Elements reveals the hidden tools.

Click the Brush to select it. Next, click the foreground color box at the bottom of the Toolbox to reveal the color palette; choose a color to paint with.



The Brush Tip palette offers wide-ranging options for each paint stroke.

Paint Options

Once you select a tool, the Options bar (found immediately below the Menu bar) reveals many options and settings for that tool. With the Brush tool selected, you'll see drop-down menus for brush tips, brush size, mode, and opacity, and you'll also see an Airbrush button. If you're using a tablet with a stylus, you may also see Brush Tablet Options. Finally, there's another brush button on the Options bar, this one offering the Brush Dynamics palette, which helps control how the brush behaves.

Begin with the brush tip—click the arrow next to the wavy line to reveal the tip palette. There are more than a dozen categories of brushes, each with a variety of tips to choose from. For example, the categories run from Dry Media Brushes (with tips such as pastel or permanent marker) to Special Effects Brushes. Each one delivers a different stroke of color; with so many ways to paint color, you may find yourself testing out each option before you can even choose one to begin. If your decision would be easier with larger thumbnails or a list of available tips instead, click the arrow to the right of the palette to reveal those options. When you've decided on a tip, click it to select it.

The next decision is Size. The Size slider sets the size of the brush in pixels. Move the slider to adjust or type a number in the corresponding text box.

To the right of the Size section is the Mode field. This setting is to specify how your brush strokes blend with the base color. Because Mode deals more with blending, we'll discuss this in a future issue when we delve more into working with blending color. Opacity is the next slider bar. This setting controls how much your brush strokes show what lies beneath them. A lower opacity allows more of the underlying layer to show.

Finally, although the brush tip and size are still dictated by the other Options settings, clicking the Airbrush tool delivers a softer-edged color—essentially mimicking the technique of spraying color.

Pencil Choices

Unlike the Brush tool, which is used to create smooth color strokes, the Pencil (right-click to find it under the Brush tool button) delivers hard-edged, well-defined lines. The Pencil has several of the same Options bar settings as the Brush: Size (line thickness), Mode, and Opacity. One option that's different is Auto Erase, which lets you quickly switch between the background and foreground colors. With this button clicked, the pencil paints with the foreground color at first, but when you begin drawing in an area that you've already colored with the foreground color, the pencil switches to the background color.

The Elements toolbox offers far more than a single brush size and No. 2 pencil. Armed with a little know-how, now you can adjust settings to make them into the very tools you need.

BY ANNE STEYER PHELPS

Browsers

Give Opera's Latest Features A Whirl

Opera 10

Beginner

Opera 10, the latest version of the perennial dark horse in the browser race, pulls together speed with a lot of interesting abilities you don't see in the competition. Three of the freshest Opera features can be found snuggling down in the bottom-left corner of the browser's main screen.

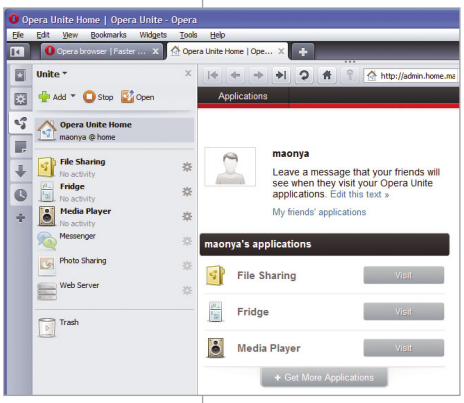
Opera Link, Opera Unite, and Opera Turbo have tiny buttons on the Status Bar that don't attract a lot of attention, but they're worth exploring.

To try out some of these new Opera gizmos, first you'll need the new Opera. Go to www.opera.com and click the Download Opera button. It's a relatively fast download and simple to get started.

Opera Link

First up from the left corner, the button for Opera Link looks like two opposing arrows. Opera Link synchronizes information among copies of the browser you might have installed on various computers and your mobile phone. Click the Opera Link button to configure the service, which requires that you sign up for a free Opera account so that Opera can figure out which computers are yours.

In the Synchronization Options section, you can choose what you'd like to synchronize—bookmarks, Speed Dial entries, history information, searches, and notes are among the options. Make your selections and click Finish; the Link button turns green. That means your browser information has been sent to Opera's servers, and it's ready to be synced with your other computers. You'll need to sign in to Link on each computer you want to put in the mix.



Opera's Unite feature makes it easy to share large files with other Opera users.

Although Opera Link only works with the Opera browser, as you might expect, you can access a Web page version of your bookmarks, notes, and a representation of your Speed Dial page from any browser by logging in to the link.opera.com site.

Opera Unite

The middle button on the Status Bar is Opera Unite. You can enable Unite by clicking the fan button and selecting Enable Opera Unite. Click Next, and you'll be asked to set up an Opera account (if you don't already have one). Enter a username and password and then enter a name for your computer. Click Finish.

Unite doesn't do anything on its own; instead, it enables some potentially interesting third-party features. Unite lets your browser connect to other computers through the Internet. Basically, Unite lets Opera act as a Web server, right on your own machine. Rather than merely using the Internet, your computer becomes part of the Internet.

What can Unite do for you? Opera has a few ideas, which you can find at unite.opera.com/applications. They include applications that let you share files between two computers, applications that allow you to stream music from your home computer to other computers, and even a server application so you can run a Web site from home.

Unite probably isn't something that most users would rely upon day in and day out, but exploring the different applications available could lead to a fun discovery. At the very least, Unite applications can make it easy to access files from your machine while you're away.

Opera Turbo

The last button on the Status Bar turns on Opera Turbo, a feature that attempts to speed up loading Web pages by compressing them. With Turbo enabled, your pages will pass through an Opera server and be "squeezed down" before being pushed the rest of the way to your browser.

What this means, in practice, is that many Web page graphics may seem more grainy or pixelated than normal. It works well on the small screen of a mobile phone browser. It can also be a good compromise for any user with a slow or spotty Internet connection. Click the Turbo button to switch on the Opera Turbo feature. Clicking the button again disables Turbo, so you can choose to enable it full-time or only when your Internet connection is slow.

Link, Unite, and Turbo are just a few of the new additions wrapped into Opera 10. If you haven't tried Opera in awhile, poke around a little—you might find one of these niche capabilities fills a software gap in your life.

BY ALAN PHELPS

Quick Studies
How-To

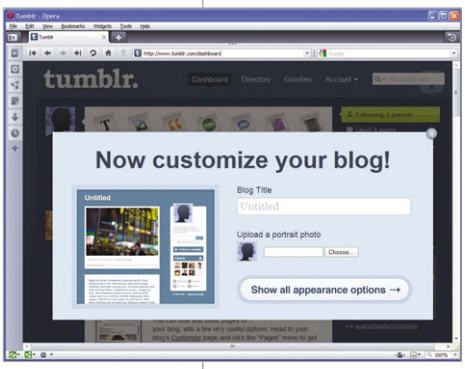
Online

Roll Your Own Blog With Tumblr

Tumblr

Beginner

Blogging is a fun and effective way to communicate with anyone from the unknown masses to your own extended family. Tumblr, a free and easy blog publishing tool, focuses on short spontaneous posts. Get started at www.tumblr.com. There, you can grab a free account for yourself, customize your blog, and start following other Tumblr users.



Tumblr is a well-designed microblogging tool that makes it simple to share your thoughts with the world, or, at least, whoever is interested.

Post It

If you're familiar with Blogger or some other blog site, you'll recognize the basics of Tumblr. Signup is simple: Enter an email address, a password, and an address for your blog.

Tumblr takes you immediately to your Dashboard, which you can always reach by clicking the Dashboard link at the top of the page. Front and center on the Dashboard is a menu of big buttons representing the types of posts you can create. Depending on what you have in mind, you might choose text, a picture, a link, a quote, or one of a few other options. Different types of posts lead to different input pages where you can create your new entry. Write or upload what's on your mind, click Create Post, and you've got a new blog entry.

Generally speaking, Tumblr is meant for fast microblogging rather than long ponderous tomes. However, there's no reason you can't write a more substantial post. Unlike Twitter, Tumblr is not limited to the 140-character limit of a mobile phone text message. You can post what you like, including short status updates, long diatribes, pictures, links, and just about anything you find in a typical blog.

The first time you create a post, Tumblr presents a range of options to change the appearance of your blog. Be sure to click the Theme link, where you find many different looks created by other Tumblr users. Choose something that matches your style.

Your new post appears on your Tumblr blog for the world—including non-Tumblr users—to see. Anyone will be able to find it at the URL you chose during the account setup process. You and other Tumblr users can also see your posts through the Tumblr Dashboard page.

Dashboard

Tumblr is kind of like two sites in one: a blogging platform and somewhat of a news aggregator that helps you follow what everyone else has to say.

The Dashboard page combines both aspects of Tumblr. Below the main menu at the top of the Dashboard, you'll see the post you just wrote; below your own musings are posts by other Tumblr users. At first, you'll see only posts by Tumblr staff, but you can customize your Tumblr Dashboard feed at any time. Click Directory at the top of the page to choose Tumblr blogs that you want to show up in your Dashboard. Tumblr helpfully divides them into categories in the directory.

You can also throw your Twitter account into the mix. Click Account at the top of the page and then click Preferences. Scroll down, enter your Twitter name and password, and then check the box to show your Twitter feed in the Dashboard. Now you'll see everything from Twitter combined with the Tumblr users you follow.

Tumblr makes it easy to "reblog" items that show up in the Dashboard, whether they originate with Tumblr or Twitter. Click the Reblog link in any post. Tumblr will load up a new quote-type post that you can edit to add your own comments. That post then shows up on your own blog and appears as a comment to the item you just reblogged.

Tumblin'

You can dive into more advanced Tumblr tools, such as sending Tumblr posts to Twitter or Facebook or customizing your Tumblr URL to be your own personal domain name. Some of these options (and more) can be found through the Goodies link at the top of the Tumblr page. Others you can reach by clicking the Customize link on the right side of the Dashboard page and then clicking the Services menu.

While these additional features aren't as drop-dead simple as the rest of Tumblr, overall, blogs don't get much simpler than this.

BY ALAN PHELPS

Quick Studies
How-To

Microsoft Word 2007

Manage Dictionaries

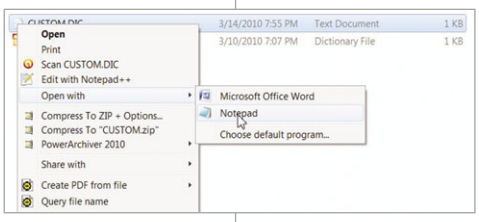
Word Processing

Intermediate

WinXP/Vista/7

There are many situations in which a person may find the need to manage multiple dictionaries in Microsoft Word 2007. Special dictionaries are useful for people who, for example, compose and spell check documents in more than one language or who work in a field with a special vocabulary, such as medicine or law. Even if you don't think you use more than one dictionary, you probably do without knowing it.

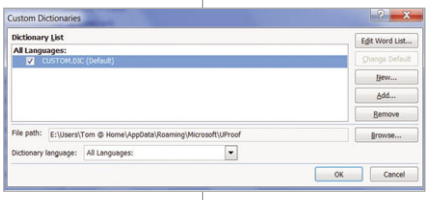
Dictionary Basics



Custom dictionaries are plain-text files and can be edited by Notepad or another text editor.

Word 2007 comes with a built-in dictionary that it uses to check the spelling of words in your documents. To adjust dictionary settings, start by clicking the Office button and Word Options. On the left side is a link called Proofing. Click it and you will see a section containing settings for how Word will check spelling and grammar. Make sure the checkbox Suggest From Main Dictionary Only is cleared if you want to use custom dictionaries. You can leave the other options alone for now. Click the Custom Dictionaries button.

You will see at least one dictionary file in the resulting window, called CUSTOM.DIC (Default). All custom dictionaries have the .DIC file extension. Whether you know it or not, you've likely already used the default CUSTOM.DIC file. When you choose the Add To Dictionary option for a word that doesn't match any entries in Word 2007's built-in dictionary, you aren't actually adding a word to the built-in dictionary, which isn't editable. Instead you are adding it to CUSTOM.DIC, which is editable.



You can manage your custom dictionaries from the Custom Dictionaries window.

Use The Custom Dictionaries Window

Several basic dictionary-related tasks can be performed from the Custom Dictionaries window. Select CUSTOM.DIC by clicking it. The File Path area shows where the custom dictionary is located. This depends upon your operating system. For Windows 7 and Windows Vista, custom dictionaries are stored in C:\USERS\<*USERNAME*>\APPDATA\ROAMING\MICROSOFT\UPROOF. In Windows XP, the location is C:\DOCUMENTS AND SETTINGS\<*USERNAME*>\APPLICATION DATA\MICROSOFT\UPROOF. Knowing the location of your custom dictionary is helpful if, for instance, you'd like to back it up.

The buttons along the right provide access to the most commonly used functions for working with custom dictionaries. The Edit Word List button at the top lets you manually add a word to the list. For example, click the Edit Word List button, type **lorem** in the Word(s) space, and then click Add. Note that the Word(s) space will allow a phrase, but spell check looks at words or parts of names individually. So instead of entering "Aaden Bolano," you'd have to make one entry for Aaden and one for Bolano.

You can delete words from a custom dictionary from the same area. Simply select the word you want to delete and click the Delete button. You can also clear the entire dictionary of entries by clicking Delete All. A warning will appear asking if this is what you really want to do. Unless you've made a backup, there is no way to undo this action. If you click OK, the dictionary will be completely emptied of words.

The Edit Word List button works well for adding or deleting one word at a time, but if you have a lot of words you want to add or delete, or if you wanted to edit the list as a whole, there's an easier way. Custom dictionaries are plain-text files, so they can be edited outside of Word 2007 using a text editor such as Notepad. (Do not use Word to edit dictionary files.) Find CUSTOM.DIC using Windows Explorer at the locations cited above and open it. If it doesn't automatically open in Notepad, right-click the file, point the cursor to Open With, and choose Notepad. If Notepad is not one of the choices, click Choose Program (in WinXP) or Choose Default Program (in Vista and Win7), and find Notepad on your computer. Once you have CUSTOM.DIC open, you can edit it like any other plain-text file. Each entry must reside on its own line. Customizing your dictionary lets you tailor Word to your needs and will ultimately help you to spell check more efficiently and accurately. ||

BY TOM HANCOCK

Quick Studies
Problem-Solver

Microsoft PowerPoint 2007

Troubleshooting Animation

Presentation

Intermediate

WinXP/Vista/7

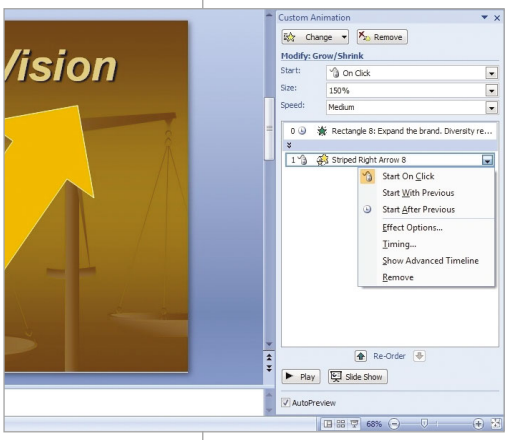
Animated text and objects on your slides grab attention by turning static elements into dynamic features. But getting animations to perform exactly like you want can get tricky. If things start to feel a little out of control, check out these solutions to common problems.

I clicked a text box to animate its bullet points, but when I put the pointer on an animation type on the Animations tab, the preview shows the whole slide in motion.

The preview buttons on the Ribbon apply to slide transitions, not animations for individual elements. To animate a specific text box, click the box, then go to the Animations tab and look for the Animate box. Click the drop-down menu and then click the animation you want to apply to the bullet list, such as Fade, Wipe, or Fly In. When you rest the pointer over an option, you'll see a preview of the animation in the main pane.

The bullet points in my text box appear onscreen all at once rather than one-by-one.

You can fix this by making a different selection in the Animate drop-down box. Under the animation type you want (such as Fade), choose By 1st Level Paragraphs rather than All At Once. Watch PowerPoint's automatic preview of your animation in the main pane to confirm that the setting is what you want.



Use the Custom Animation pane to put animations in the right order and get exactly the look you have in mind.

I need two animations to run in sequence, but I don't want to click each time to start them.

PowerPoint offers a variety of automatic settings to make animations run at the appropriate times with hardly a mouse-click on your part. These tools are among those available under the Custom Animation button. When you click the button, a new pane appears on the right side of the screen. Each animation assigned to a slide appears in a list here. Click an animation's name, then use the drop-down list labeled Start to make adjustments to when the animation runs. To make an animation run as soon as the slide appears, make sure it's the first animation on the list (see below) and set it to run After Previous. The slide's appearance will trigger the first animation. To make the second animation run at the same time, use the Start drop-down menu to set the animation to run With Previous.

My animations aren't running in the right order.

It's easy to rearrange the order in which animations run. Open the Custom Animation pane as described in the previous answer. Click any animation listed in the pane and drag it to a new position in the order. To test the new sequence, click the Play button at the bottom of the pane to see the animations executed in order.

I found an animation similar to what I had in mind, such as Grow/Shrink to emphasize an object in a chart, but it doesn't act exactly as I've seen it perform in other presenters' slides.

To fine-tune the performance of an animation, dive into its Effect Options. Open this dialog box by clicking the arrow beside the animation's name in the Custom Animation pane and choosing Effect Options. The controls available here vary by the particular animation. With Grow/Shrink, for example, you can set how large the object grows and whether it shrinks back down to the original size. With Spin, you can control which direction and how far an object spins when animated.

I'd like to start an object's animation by clicking the object itself instead of worrying about clicking in a particular order relative to other animations.

This is another setting you'll find under Effect Options. In the animation's options dialog box, click the Timing tab and the Triggers button. Click the radio button for Start Effect On Click Of, then use the drop-down menu to choose the name of the object itself, such as Rectangle 7. Not sure of the object's name? Look for the highlighted name in the Custom Animation pane.

Objects that fade into view are a little dull. I need something more dramatic.

Try a motion path. Click the object, then in the Custom Animation pane, click Add Effect and Motion Paths. The options in this particular menu make selected objects slide across the screen in a variety of directions or follow more exotic patterns, including a star, spiral, wave, or the always-in-demand "peanut."

BY TREVOR MEERS

Quick Studies
How-To

Microsoft Excel 2007

Nested IF Functions

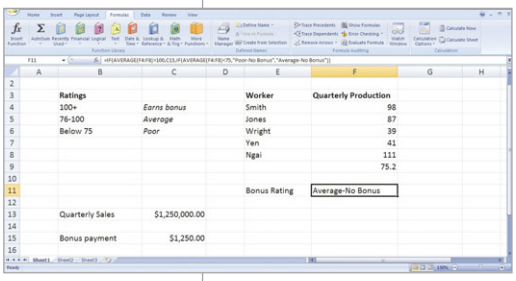
Spreadsheet

Advanced

WinXP/Vista/7

Functions, as you probably already know, are prebuilt formulas that save you the trouble of creating complex formulas from scratch. To use a function, you choose it from a list of options and then fill in the arguments, which are the formula elements that make functions work on specific data.

It's easy to follow the simplest functions. @SUM, for example, adds up a range of cells you specify. More advanced functions such as IF carry out logical functions such as testing values and performing different actions depending on the results. The IF function gets truly powerful when you start nesting, or embedding other functions as arguments inside an IF function. By nesting IF functions within other IF functions, you carry out what is essentially simple programming. The function follows a logical sequence, evaluating values and performing one action if the answer is "yes" and another action if the answer is "no."



The nested function in the highlighted cell checks worker productivity to determine whether the workers earn a bonus or ratings of "Average" or "Poor." Nested inside the overall IF function are two AVERAGE functions and another IF function.

You can nest functions up to 64 levels deep in Excel 2007, which some users consider a great step forward from the old limit of seven levels. Nesting that many functions is really using Excel for programming functions beyond its design. But even if you go no more than one or two levels deep, nested IF functions can prove extremely useful. This month, we'll walk through how to set up a basic nested IF function.

Create A Nested Function

Let's say that your department's workers earn a bonus if the team averages a monthly output of more than 100 widgets. The exact bonus payment is calculated in cell C15. We can set up a nested function that checks average worker output to determine bonus eligibility, accesses the bonus amount in cell C15, and then displays the bonus due to each worker. Trust us, it's not as complex as it sounds.

We'll assume your worksheet already contains a list of how many widgets each worker produced this month. Click the cell where you want the nested function's results to appear. Now set up a formula to find the average of the workers' productivity. Use the Function Wizard (the Fx button on the Formula Bar) to choose the AVERAGE function and highlight the productivity cells to help it calculate the average.

Then copy that formula so you're ready to paste it into the IF function. Now click the Function Wizard and click IF on the list. You'll see that the function has three arguments: the logical test it uses to evaluate data, the value it returns if the test answer is true, and the value it returns if the test value is false.

Paste the AVERAGE formula into the position of the IF function's first argument so it will be used as the first part of the logical test. Next, tell the IF function what to compare the average to by entering **>100**. This completes the logical test.

Now tell the IF function to enter the bonus payment if the productivity average has exceeded 100. Enter **C15** to have the IF function pull the bonus payment in from the bonus payment calculated in cell C15. Finally, tell the IF function what to do if the evaluated data fails the test, meaning it was below 100. Enter **No Bonus** to make this text appear when the workers don't hit the average.

More IF Functions

Several other Excel functions are very effective as nested elements inside an IF function. Nesting IF functions within each other, for example, offers some powerful logical tests. As you learn to use them, just keep thinking of a series of IF functions as a logical flow chart. If the answer to a test is "yes," one thing happens. If the answer is "no," another happens. You could set up the first IF function to enter a bonus payment if workers' productivity meets the criterion. If the workers fall below the mark, the false value could be another IF function that Excel works through to evaluate just how low the worker's score was and returns various results. See the photo on this page for an example of this kind of nested function.

IF functions also team up well with nested AND, OR, and NOT functions. By nesting these inside an IF function, you can carry out IF's action only when the appropriate data meets multiple conditions (AND), one of the conditions (OR), or none of the conditions (NOT).

BY TREVOR MEERS

Quick Tips

Secrets For Succeeding In Common Tasks

BY STEPHEN J. BIGELOW

Mice

Question: I thought that optical mice were supposed to work better than trackball mice. Why does my optical mouse cursor hesitate and jump around?

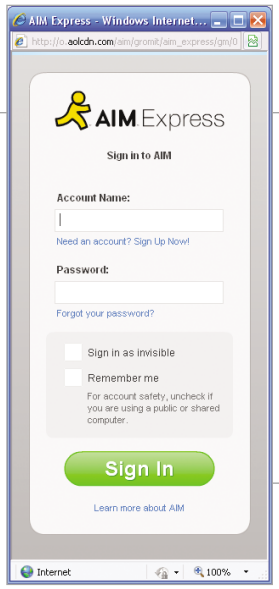
Answer: The problem with older ball-style mice is that crud from a desktop or mousepad can work into the ball and onto the sensing rollers, in turn interfering with the mouse tracking. Optical mice eliminate those moving parts, but not the crud from your surface areas. Look underneath your mouse to see if there is hair, dirt, and debris accumulating along the pads that the mouse slides on. This buildup can alter the distance between the optical sensor and the mousepad and cause tracking problems. Clean off any accumulations of debris from underneath the mouse and take a moment to clean any dust or hair from the sensor; a short blast from a can of compressed air should do the trick.

Also, think about the surface your mouse uses. Optical mice work by detecting light reflected from the texture of a surface. It's that texture that breaks up the light signal and provides the "pulses" that register movement. If you try to use an optical mouse on a very smooth surface (such as glass) without sufficient texture, the mouse may not work properly.

AOL Instant Messenger

Question: I need to upgrade my older version of AIM (AOL Instant Messenger). Is it better to use the version of AIM that installs on my PC or the online version of AIM through a browser?

Answer: The choice of installing a local AIM utility or accessing AIM through a browser-based service is largely a matter of personal preference. However, the benefits of SaaS (software as a service) are gaining the attention of businesses and everyday PC users alike. With a local installation, you have to keep it updated and backed up. A browser-based utility doesn't take up space on your hard drive, you don't need to worry about installing or updating software (the provider does it on its end), and you can access the service from any computer with a Web browser.



Browser-based software such as AIM can often provide more flexibility than installed versions of the same services.

USB External Hard Drives

Question: I use USB external hard drives for backup and project storage. Is it better to leave them on or turn them off when I'm not using them? Should I attach them to my UPS (uninterruptible power supply)?

Answer: If you access those external hard drives frequently, it's best to leave them turned on. Try cycling drive power to match your computer use. For example, turn the drives on when you turn on your PC in the morning but turn the drives and the PC off at night. A typical USB hard drive uses about as much power as one or two nightlights—especially when it idles—so turning the external drives off won't save significant money on electricity.

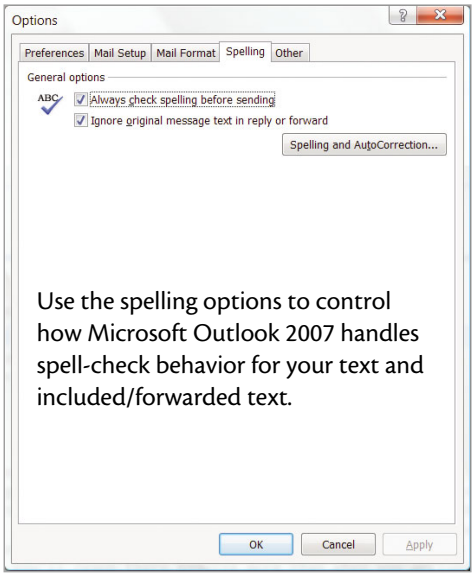
USB hard drives still require a separate power source, but you should only attach the drive's power adapter to a UPS if you need to save critical work to that drive before the computer shuts down, for example, if you normally work with files or applications on the USB drive then power the drive from your UPS. This way, you know the drive will be available during a power outage so that you can save your work and exit safely. However, if you only use the drive for backups or occasional file access, running the external drive from your UPS won't provide much benefit.

Microsoft Outlook 2007

Question: I like the spell-checker in Outlook 2007, but is there any way to keep it from checking the spelling of original or included text? I only need to fix my own spelling.

Answer: You can set spell-checking options by launching Outlook, selecting Tools, choosing Options, and selecting the Spelling tab. Chances are that you have already checked the Always Check Spelling Before Sending option, so leave that enabled. The option you're interested in is Ignore Original Message Text In Reply Or Forward, which should also be enabled (checked). If you must check either box, click Apply and OK.

Remember that it may be embarrassing to include spelling errors in existing or forwarded text from your friends, family, or colleagues. If you don't want to spell-check that material for whatever reason, it might be gracious for you to omit that original text if you do see an error.



Use the spelling options to control how Microsoft Outlook 2007 handles spell-check behavior for your text and included/forwarded text.

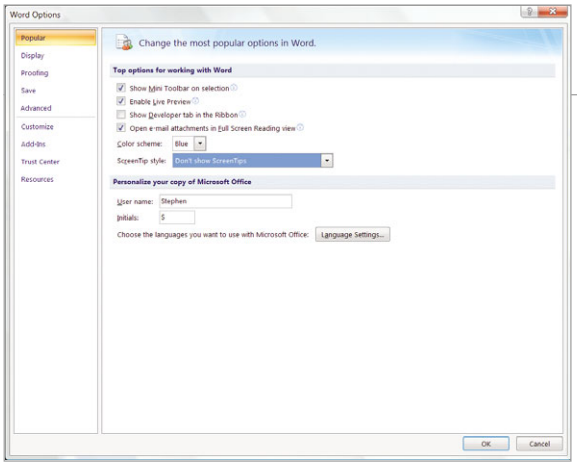
Printer Drivers

Question: How often do I need to update the drivers for my printer?

Answer: Anytime that you make changes to a computer's setup, you risk introducing incompatibilities and instabilities that can impede the computer's operation. If your printer is operating without trouble, you may want to leave it alone. For example, if the visuals for your new game are behaving badly with your current video driver, a video driver update might be just the right fix. But updating that driver just for the sake of doing it isn't necessarily the right choice. It's the same issue for printer drivers. You normally won't need to update your printer drivers if the printer is working properly, but an update may be needed if there are performance problems or stability issues (which are rare for printer drivers).

If you're considering a printer driver update, take the time to read any documentation that discusses the fixes or changes available. If you're experiencing the problems listed or stand to benefit from any changes, go ahead with the update; you can always roll back to the older printer driver if new problems arise.

Microsoft Word 2007



Microsoft Word 2007 lets you scale back ScreenTips or turn them off entirely.

Question: How can I turn off the annoying ScreenTips in Microsoft Word 2007?

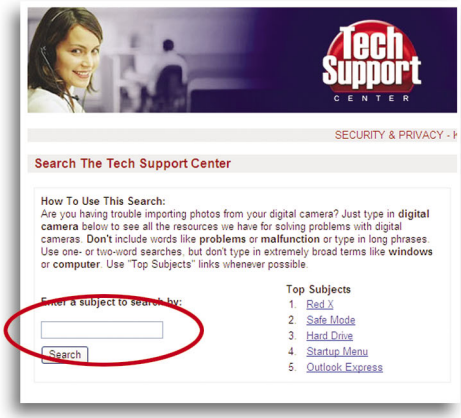
Answer: You can turn off ScreenTips in Word 2007 through the Word Options dialog box. Launch Word (you don't need to load a document), click the Office button, and then select the Word Options button. Under Top Options For Working With Word, locate the ScreenTip style drop-down menu, choose Don't Show ScreenTips, and click OK to save your changes. You can always return to this dialog box later to re-enable the ScreenTips for yourself or other users.

Search The Tech Support Center

Computers, printers, and other devices are wonderfully helpful tools—when they're working. But it's frustrating when a computer won't boot up or a printer won't, well, print! The only thing more frustrating is not knowing where to find answers.

Now it's easier than ever to find the information you need by searching SmartComputing.com's Tech Support Center. Simply type a word in the search box, and you'll find information on that topic from different areas of the Tech Support Center, including Solutions Knowledgebase, Security & Privacy Web Log, Basic Troubleshooting Articles, How To Install, and many more. Topics ranging from hard drives and printers to the Blue Screen Of Death and that pesky Red X are all covered extensively in an easy-to-understand problem/solution format. Accessing this information is simple; here's how:

1. Go to SmartComputing.com and click the Tech Support Center link.
2. Enter a subject in the Search box and click Search. Avoid using words such as "problems" or "malfunction" and use the Top Subjects links whenever possible.



Smart Computing's Daily Fun Fact & Stat

When Kids Are Old Enough For A First PC

The latest survey from Retrevo, the "Gadgetology Report," asked parents at what age they think it's appropriate to buy a child his/her first PC. Almost one-third of the parents surveyed (31%) said that kids under 9 were old enough for their own PCs. A slightly larger group, 35%, said kids ages 9 through 12 could handle their own computers. Thirty percent thought the first computer should arrive sometime between the 13th and 18th birthdays. Just 4% of parents thought computer ownership should wait until a child is 18 years old.

Microsoft's New Mouse

Twenty-seven years ago this month, Microsoft introduced its first two-button mouse. The mouse didn't sell well, but Microsoft would find success with an updated model two years later.

Smart Computing Dictionary & Encyclopedia

The history of computing might be longer and more interesting than you think. Learn about computing's founding fathers, the origins of popular computing terms, and more in the *Smart Computing* Dictionary & Encyclopedia. You'll find a link to it on our home page.

More TVs Connecting To The Internet

According to iSuppli, 27.5% of the consumers who bought a new TV in January said that their new TVs were connected to the Internet, either directly or indirectly through a set-top box or other device connected to the TV. Just a month earlier, only 24.3% of consumers who bought a TV that month said the same.

Compiled by Tessa Warner Breneman
Graphics & Design by Lori Garris

Web Cams

Web cams are great tools to bridge long distances between you and your loved ones. Not only can you have a virtual face-to-face conversation with friends and family, but you can also get a sneak peek at new additions to the family or simply approve of your friend's new haircut.

Many Web cams feature the ability to add video effects (such as avatars and photographic filters), snap still photos, and create short videos to post online. Additionally, most Web cams integrate with popular instant messenger clients, such as Windows Live, Yahoo! Messenger, and Skype. Here's a look at some other features commonly found in Web cams.

High Definition

High-definition Web cams let you capture high-quality video. For instance, the Microsoft LifeCam Cinema has HD resolution (720p) plus ClearFrame technology and auto focus to help stream a clear and detailed image, even in low-light environments. Almost all Web cams have a digital microphone incorporated into the camera, and this particular one has noise-canceling technology to prevent background noise from interfering with the conversation.

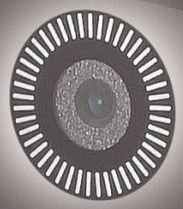
Before you head out to purchase the latest and greatest HD Web cam, note that the system requirements are higher for an HD Web cam than a standard-definition Web cam. So, check your computer system specifications to be sure they match up with the Web cam requirements. And although HD Web cams can deliver a high-quality picture, your network must have the speed to support it. Additionally, the chat program you are using might restrict some of the features offered by your HD Web cam.

LifeCam Cinema
$79.95
Microsoft
www.microsoft.com

Video On The Go

Frequent travelers, such as professionals, students, or retirees, who want to check in at home can benefit from a Web cam designed specifically for laptops. The Logitech Webcam C905 offers many of the same features Web cams designed for desktops have, such as HD video capture (720p), auto focus, and a noise-canceling digital microphone, but it comes with a clip specifically designed to attach to a thin laptop screen. When you're home, you can also clip it to your desktop monitor.

C905
$99.99
Logitech
www.logitech.com



Built-In Web Cams

Rather than purchase both a new notebook and a Web cam, consider purchasing a notebook with a built-in Web cam. For example, the Asus N61Jv offers a 2MP (megapixel) camera planted in the top perimeter of the screen. Not only will you save yourself from purchasing an additional accessory, but you can also travel lighter.

N61Jv
$899
Asus
www.asus.com

Set Up Surveillance

Some Web cams are designed for home surveillance, rather than video chatting. For example, some Web cams can be set up inside the home to check on pets and kids while you're away. Weather-resistant outdoor security Web cameras can be set up to guard against intruders. Like other Web cams, many surveillance cameras connect to the Web so you can periodically check in from any Internet connection.

With setups such as the Logitech Indoor Video Security Master System or Outdoor Video Security Master System, you can also configure the system to send you emails and text messages if the camera detects any motion. Both the indoor and outdoor Logitech cameras connect to the Web using HomePlug technology, which delivers a connection to your computer through powerline networking. Once you have downloaded Logitech's Command Center software, you just plug your camera into an electrical wall socket, insert the HomePlug USB adapter into a USB port in your computer, and then plug its power cord into a wall socket.

Indoor Video Security Master System
$299.99
Logitech
www.logitech.com

Outdoor Video Security Master System
$299.99
Logitech
www.logitech.com

What To Do When Your Microphone Doesn't Respond

Microphones connected to PCs used to be restricted mainly to the realm of gamers looking to chat with their teammates to get a leg up on the competition. Now, an explosion of VoIP (Voice over Internet Protocol) and video chat programs such as Skype (www.skype.com) has made PC microphones go mainstream, and it's hard to find a laptop these days that doesn't come with a Web cam and integrated mic.

One thing that hasn't changed is that mics still pose problems. Sometimes, fixing a microphone problem is as simple as adjusting a Windows setting, while other times, a hardware replacement is in order. So, knowing the differences among various errors when troubleshooting can save a lot of time and maybe even some cash if you avoid having to buy a new mic.

If you discover your chat partner can't hear you on the other end, or if your microphone is periodically cutting out or has sound quality or volume issues, try these troubleshooting tips.

Update Drivers

Drivers are programs that serve as a translator between Windows and the PC's hardware. Better drivers can fix known problems, make hardware work more efficiently, or even add new features.

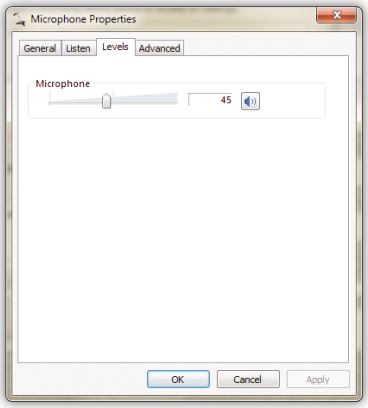
If you use a USB mic, check the manufacturer's Web site for a new driver, making sure to download the driver for your exact make and model of mic. If your mic connects to an audio card or the computer's integrated mic jack, check with the card or computer manufacturer for newer, potentially better audio hardware drivers.

Check The Connection

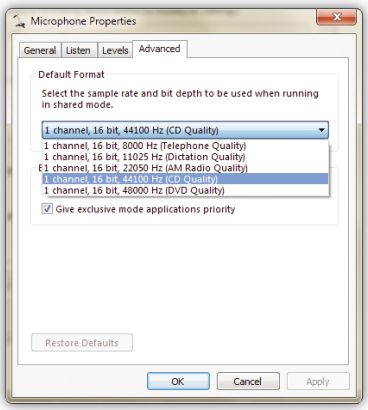
Now, see if Windows recognizes the mic. In Windows XP, right-click the Speaker icon in the System Tray and click Adjust Audio Properties. Select the Voice tab, click Test Hardware, click Next, and, when the Sound Hardware Test Wizard appears, talk into the mic to see if the sound bar in the Recording box picks up your voice.

In Windows Vista and Windows 7, right-click the Speaker icon in the System Tray and click Recording Devices. Select the Recording tab and look for your microphone on the list of devices. If it says Not Plugged In instead of Working, Ready, Default Device, or Default Communications Device, then you have a connection problem.

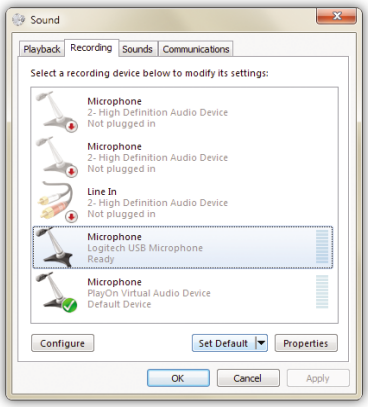
Most mics use one of two types of connections to interface with the PC: USB or the microphone jack on the computer's sound card. If yours uses a USB connection (or is integrated with a Web cam that uses USB), make sure the USB connector is pressed all the way into the USB port. If that doesn't do anything, try a different USB port.



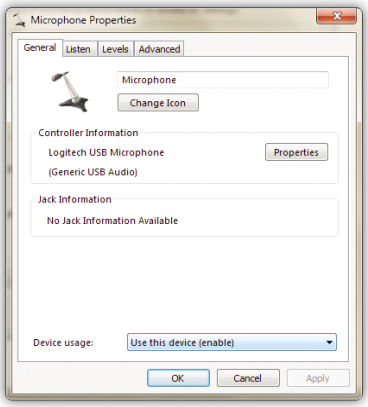
Most programs do a good job of automatically adjusting mic volume, but sometimes it's best to set it manually.



Changing the sample rate of the mic may not make a huge difference in sound quality unless it's accidentally set to an extremely low setting.



Setting the correct mic as the default solves a lot of problems.



It doesn't happen often, but sometimes mics are shut off in Windows and need to be enabled manually.

If your mic plugs into the computer's sound card, make sure to connect it to the correct port. Sometimes, the mic port is labeled with a little icon that looks like a mic, but that isn't always the case, so check the documentation that came with your PC to see precisely where the mic port is. One of the most common mic errors is plugging it into an output port instead of an input port; so with any luck, this will solve all your problems.

Also, check the cable for kinks. A mic cord has tiny strands of metal twisted together at its core, and if the wire is pinched or crushed, it can sever the strands, ruining the connection. The only solution in this case is to replace the mic or have a professional repair the cord.

Adjust Volume Level

Many Windows users are accustomed to adjusting the volume slider accessed by clicking the Speaker icon in the System Tray but don't realize there are separate volume controls for most input and output devices, including mics. To adjust the microphone volume in WinXP, right-click the Speaker icon in the System Tray, click Adjust Audio Properties, and select the Voice tab. Click Volume in the Voice Recording box and use the microphone volume slider to adjust the volume. You can also click Advanced (if available) to check the Microphone Boost box if sounds from your mic are too low or remove the check if sounds are too loud.

In Vista and Win7, right-click the Speaker icon in the System Tray and click Recording Devices. Select the Recording tab, click the entry for the microphone, and click Properties. Select the Levels tab and use the slider to adjust the volume. You can also click the Custom tab to check or remove the check from the Microphone Boost box, depending on whether the audio from your mic is too soft or loud, respectively.

Adjust Settings

Most mics simply work when plugged in, but sometimes settings aren't applied correctly or something else goes wrong and you must manually tweak things.

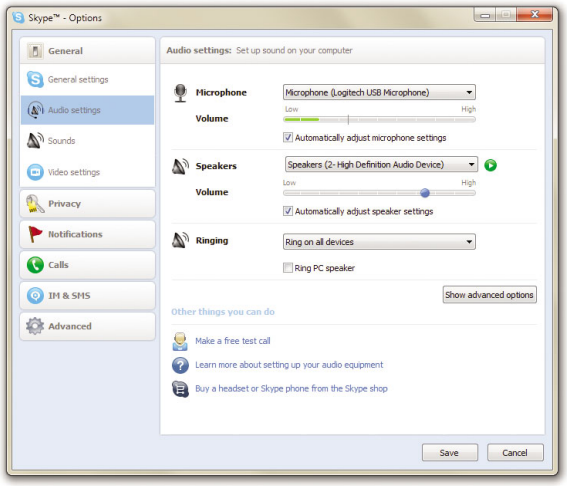
In WinXP, right-click the Speaker icon, click Adjust Audio Properties, and select the Voice tab. Use the Default Device drop-down menu to select the mic you want to use in all programs by default and click Apply and OK.

In Vista and Win7, right-click the Speaker icon in the System Tray and click Recording Devices. If there isn't a green circle with a check mark in the middle on the entry for the mic, then the mic isn't selected as the default device, and that may be the root of your problem. Click the mic entry you want to use and click the Set Default button.

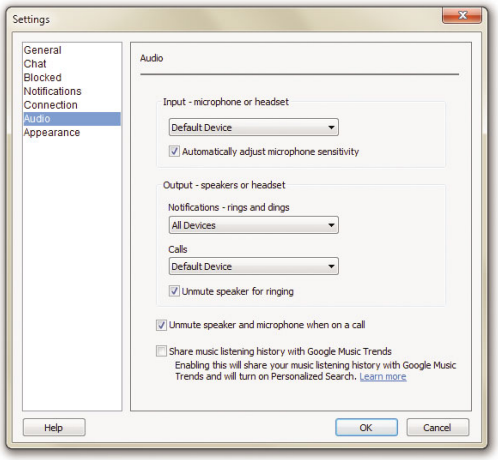
Next, click Properties. In the General tab, make sure Use This Device (Enable) is selected in the Device Usage drop-down menu. Click the Levels tab and make sure the slider isn't set to zero. If the Speaker icon next to the slider has a red circle with a slash through it, the device is muted, and you must click the Speaker icon to turn off muting. Finally, select the Advanced tab and make sure both boxes in the Exclusive Mode section are checked. Click Apply and OK.

Improve Sound Quality

If the mic works but sound quality is poor, there are a few extra fixes to try if you have Vista or Win7. Right-click the Speaker icon, click Recording Devices, and select the Recording tab. Select the Microphone entry and click Properties. Select the Advanced tab. Use the Default Format drop-down menu to select at least 1 Channel, 16 Bit, 44100Hz (CD Quality), if it isn't already selected, and click Apply to try it out. You may even be able to go one better and hear a difference by selecting 1 Channel, 16 Bit, 48000Hz (DVD Quality), but most



Skype offers plenty of audio tweaks in the Options dialog box.



Sometimes, it's helpful to select a microphone in Google Talk instead of using the default setting.

consumer-level mics don't have good enough quality to sound any better at that highest setting.

Something else to consider if you have a mic that plugs into a mic jack and mainly use VoIP is switching to a USB mic. Windows recognizes USB mics as separate audio devices from the audio hardware that is already installed, so USB mics are far less prone to the type of electromagnetic interference from the PC's internal hardware that plagues mics that plug into a mic jack. The difference in quality can be dramatic depending on the type of hardware and software you use.

Software Tips

Mics interact with the software you use to chat, so there isn't always a Windows setting that will fix your mic-related problem. Here's how to adjust the mic in a few popular chat programs.

Ventrilo. Click Setup, select the Voice tab, and make sure Enable Outgoing Voice Communications is checked. Check Use Direct Sound if your hardware supports it, and if you're having trouble transmitting voice, try changing the Output Device using the drop-down menu. If that doesn't work, set it back to Default Sound Device and try switching the Input Device using the drop-down menu. You can also experiment with the outbound and inbound sliders under the Amplifiers section to tweak incoming and outgoing voice volumes.

Skype. Click Tools and Options. Click General in the menu on the left and click Audio Settings. Use the drop-down menu in the Microphone section to select your mic if it isn't selected. Usually, it is best to leave the Automatically Adjust Microphone Settings option selected, but if the sound it picks up is consistently louder or softer than you'd prefer, deselect the box and use the volume slider to make adjustments.

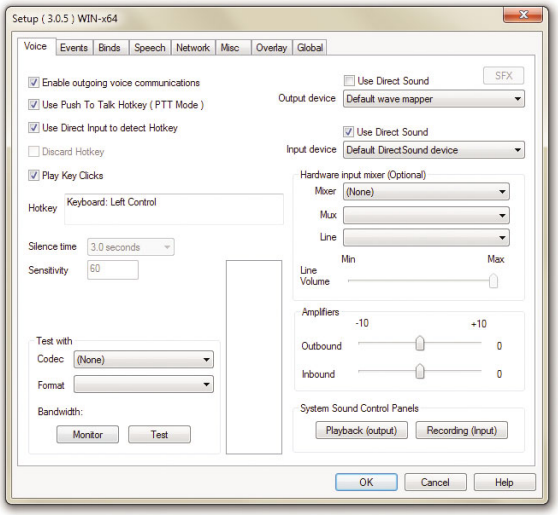
If you have multiple mics attached to the computer, it is also a good idea to click Advanced and use the Move Up or Move Down buttons to put the mic you prefer to use in Skype at the top of the list.

Google Talk. Click Settings, click Audio, and, if the mic isn't working at all, use the Input – Microphone Or Headset drop-down menu to select something other than Default Device to see if that fixes the problem. If the people you talk to complain that your voice is sometimes fine and sometimes too quiet, remove the check mark from the Automatically Adjust Microphone Sensitivity box. Also, make sure the Unmute Speaker And Microphone When On A Call box is checked.

Can You Hear Me Now?

Chat is a two-way street, so it's always entirely possible that hardware or software on the other end of the connection is causing the problem. Be sure to use text chat or a plain-old telephone to walk your chat buddy through the tips supplied in this article. It might not be what you planned to talk about, but a little tweaking can have you chatting about all the important stuff in no time. ❚❚

BY TRACY BAKER



Don't be intimidated by Ventrilo's large number of options; you likely need to adjust only a few of them to make it work.

Windows 7 Troubleshooter

Windows 7 comes with a comprehensive hardware troubleshooter that includes an excellent tool for solving microphone issues. To access it, click Start, click Control Panel, type **troubleshoot** in the Search box, and click Troubleshooting. Make sure the Get The Most Up-To-Date Troubleshooters From The Windows Online Troubleshooting Service checkbox is selected.

Click Troubleshoot Audio Recording under Hardware And Sound. When the Recording Audio wizard appears, click Next, wait for the scan to complete, and click the radio button that corresponds to the device causing trouble (assuming Windows detects it). Click Next, and Windows goes through a series of diagnostics, alerting you to problems that you can often solve by following the steps provided by the wizard. ❚

How To Fix Common Problems With Smartphones

The popularity of smartphones has soared as more people are looking for an efficient, lightweight tool that can meet their mobile communication needs. Like computers, smartphones aren't flawless machines, and, sometimes, you have to troubleshoot issues that arise.

The most common problems, such as a frozen device or connection troubles, can usually be resolved by resetting the device. First, perform a soft reset (also called a reboot), which is similar to restarting your computer. Check with your phone's manufacturer to find out if your device offers built-in soft reset features. Otherwise, many devices will reboot if you hold down the Power button for several seconds (until it shuts down) or remove the battery. You can also perform a hard reset (called a factory reset), which will wipe the device of its memory, including any applications you've downloaded, and return it to the condition it was in when you turned on your phone for the first time. Although performing a hard reset is another way to resolve many issues that arise with your phone, avoid doing it until you run out of other options. You can generally find instructions for this in your phone's users manual or on the manufacturer's Web site.

You can also correct many connection problems by making sure all of your settings are configured correctly. For example, if you are having connection issues with your Bluetooth or GPS (global positioning system) features, make sure that your radios are on by checking your phone's on-screen menus. If your smartphone is using an energy saving mode, or if you have never used those features before, the radios might be powered off and unable to send or receive a signal. On many phones, these radios are controlled under the Wireless Connections setting in the Options or Advanced Options menu.

It's also important to note that hardware and software manufacturers, as well as your network service provider, will periodically provide updates for your smartphone to patch security vulnerabilities and to fix bugs that cause lingering problems, like the updates you get for your computer. You can check for these updates and learn how to install them by visiting the manufacturer's or network service provider's Web site. Some smartphones will receive updates wirelessly. Wireless updates (also called over-the-air updates) are usually found in the Updates section of the phone's Settings or Options menu.

Some problems with your smartphone require more specific solutions. Here, we'll provide you with some common issues as well as steps to help you resolve your problem. If these solutions don't fix your issue, contact your smartphone manufacturer or your network service provider.

Problem: I can't receive email messages on my BlackBerry Curve 8500 Series smartphone.

Solution: First, establish that your BlackBerry is connected to your data network, your data service is powered on, you are in a coverage area, and you have received an activation message from the BlackBerry Internet Service for

If you are not receiving messages on your BlackBerry Curve 8520, you might need to register it with the host routing table.

Wi-Fi-enabled BlackBerrys, such as the BlackBerry Storm2, will not show maps in the BlackBerry Maps application when it is connecting to a phantom Wi-Fi network.

If you are unable to add an instant messenger account on your Palm Pixi Plus, your IM client might not be supported by the device.

any new accounts added. If you have not received an activation message, it could be because your device is not registered. To register your device, select the Options icon from the Home screen and then select the Advanced Options. From there, choose Host Routing Table (connects your device to the service provider's network), press the Menu key, and then select Register Now.

If your device has already been registered, check to see if the email message forwarding service is enabled. Then, check if the email message folders you want to receive mail from, such as your inbox, have been selected. To do this, select the Messages envelope icon on the Home screen and then press the Menu button. Choose Options and then select Email Settings. Press the Menu button again and select Folder Reconciliation. Here, you will be able to select the email message folders you want to receive mail from by selecting the checkbox adjacent to the folder. Once you are done, press the Menu button and select Save.

Problem: BlackBerry Maps does not display maps when I have Wi-Fi enabled on my phone.

Solution: Your device is unable to connect because you are not within range of a Wi-Fi connection. So, rather than communicating with the available Wi-Fi connection, your device is trying to link to an unavailable network. To resolve this problem, turn off your Wi-Fi radio and then register the host routing table. Launch the Options menu, select Advanced Options, and then choose Host Routing Table. Press the Menu button and select Register Now. Next, ensure that your data connection is working properly by opening the Web browser.

Problem: I'm having issues setting up a network connection on my Palm Pre from Sprint.

Solution: First, find a location in which you can receive a strong signal (as indicated by the white bars in the top corner of your Home screen) and then turn off Wi-Fi by opening Wi-Fi and tapping Off. Next, be sure your Data Usage is activated. To do this, press the green Phone icon, select the Application Menu, and open Preferences. Here, you can check if Data Usage is enabled. Next, try updating your network settings by pressing the green Phone icon, choosing Application Menu, and tapping Preference. Select Update Network Settings.

If you are still having trouble, try a different network band. To do this, press the green Phone icon, select the Applications Menu, and open Preferences. Choose Network Type and then select 2G only, 3G only, or Automatic.

To help discover any other problems that are preventing you from connecting to the network, run a Quick Test. To do this, launch Device Info and then choose More Info. Tap the applications menu, select Quick Tests, and then tap Start. If the phone detects a problem with one of the components, open View Results, choose Send Results, and then contact Palm for further troubleshooting tips.

Problem: I am unable to set up an IM (instant messenger) account on my Palm Pixi Plus from Verizon.

Solution: Be sure you are logged out of your IM account from other locations, such as your computer, because that could prevent you from adding the account to your Pixi. Next, check your data connection by launching your

Be sure the Background Data and Auto-Sync functions are enabled if you are having trouble syncing your Google Nexus One.

phone's Web browser and making sure you can connect to the Web.

You might be trying to add an account from an unsupported instant messenger client. To see whether your client is supported, select the Messaging icon and then choose Add An Account. Here, you will find a list of supported IM clients. If the client you are trying to add is not on this list, then it is not supported by your device.

Problem: I'm having trouble syncing my Google Nexus One smartphone.
Solution: Be sure that you have enabled the Background Data and Auto-Sync functions. To do this, click the Menu button and then choose Settings. Under Settings, find Accounts & Sync. From there, check if the Background Data and Auto-Sync features are selected and then open the account you are having trouble with. Be sure all of these services are selected under that particular account.

Problem: I can receive email on my iPhone, but I am unable to send email.
Solution: There could be an issue with your SMTP (Simple Mail Transfer Protocol) settings. To ensure your settings are correct, open the Settings menu and then choose Mail, Contacts, Calendars. Under Accounts, choose the account from which you are having problems sending email. Open Outgoing Mail Server and then select SMTP. Choose the SMTP server associated with your carrier and then slide the bar to On. If there are other features turned off, turn them on, as well.

Problem: I am unable to sync my Windows Vista computer with my Windows Mobile smartphone.
Solution: If you are using a Bluetooth dongle, make sure it is plugged in and that the most current driver is properly installed. Next, be sure your computer settings will let your computer discover Bluetooth devices. To do this, be sure you are logged in to an account with administrative privileges. From the Start menu, open the Control Panel and then select Hardware And Sound. Click Bluetooth Devices. Under the Options tab, select the Allow Bluetooth Devices To Find This Computer checkbox and then choose Bluetooth in the drop-down menu. Click OK.

On your Windows Mobile phone, launch ActiveSync, go to Menu, and select Connect Via Bluetooth. When prompted, choose Yes to set up a partnership. From Menu, select New to search for Bluetooth devices. When your PC is discovered, click the name of your PC and choose Next. When you are prompted by your device, enter your passkey and then click Next. There should be an alert on your computer that says a Bluetooth device is attempting to connect. Click this alert. On your PC, enter the passkey in the Add Bluetooth Device Wizard. (The passkey you use for your device and your computer should be identical.) Click Next and then click Next again in the Display Name window. ActiveSync should be selected in the list of services on your smartphone.

You can now finish the process by clicking Done, OK, and Done. In the Add Bluetooth Device Wizard on your computer, click Finish. From the ActiveSync application on your phone, launch the Menu and then click Connect Via Bluetooth.

Problem: I can't load a third-party application I just downloaded on my HTC Touch Pro2.
Solution: In order for your device to operate smoothly, there needs to be at least 5MB of free storage and program memory. So, if you are having trouble launching programs, it's probably because your device doesn't have enough available memory. To view how much available memory is currently on your device, open Settings, select All Settings, and choose the System tab. You will be able to find the information under Memory. If you do not have enough device memory, try to reinstall the program onto your removable memory card. If that doesn't work, the program you are trying to run might not be supported by your device, or you may have installed the wrong version of the program. ❚❚

BY TESSA WARNER BRENEMAN

In order to ensure your HTC Touch Pro2 will operate properly, be sure you have at least 5MB of free storage and program memory.

Examining Errors

Compiled by the *Smart Computing* staff

Error messages rarely provide clear explanations of the problems they represent. Some are riddled with technical jargon. Others have seemingly indecipherable codes. And some tell you exactly what the problem is but don't tell you how to solve it.

Each month, we take the mystery out of error messages that flummox our readers. Every solution includes the message in its original form, a plain-English translation of that message, and step-by-step instructions for solving the problem.

If you have questions about an error message, email us (errormessages@smartcomputing.com), and we'll try to decipher it. Tell us what version of Windows you are using, give the full text of the error message, and provide as many details in your email as possible. Volume prohibits individual replies.

Corel VideoStudio

Error

The ordinal 17 could not be located in the dynamic link library mpgvout.dll.

Translation: This error message may appear when you try to start Corel VideoStudio. The message means that other video capture software is conflicting with VideoStudio.

Solution: According to Corel, the way to solve this problem is to remove any video capture software. This includes any software you installed when you added a video capture card to your computer. (It doesn't, however, include the video capture card's driver. Your card needs that to communicate with the PC.)

To find (and remove) third-party video capture software, click Start and Control Panel. In Windows XP, double-click Add Or Remove Programs (in Classic View). In Windows Vista and Windows 7, click Uninstall A Program (in the Programs section).

Next, scroll through the list of programs in search of video capture software. Adobe (www.adobe.com), Diamond (www.diamondmm.com), Magix (www.magix.com), Pinnacle (www.pinnaclesys.com), and Sonic Solutions (www.roxio.com) are among the most popular such programs. If you see one of these programs (or any other third-party video capture software), uninstall it via this window. You may need to reboot the computer during the process. Once the program(s) is uninstalled, start VideoStudio again. You should not encounter the error message at this point.

Corel's Web site notes that Microsoft Windows Movie Maker does not cause this error message. There is no need to remove the software. For more information, visit tinyurl.com/yhbpk4p.

Google Picasa Web Albums

Error

500 INTERNAL_SERVER_ERROR

Translation: You may encounter this error message when you direct your Internet browser to your online Picasa Web Albums account. The message means that a problem (likely with the server, rather than your PC) is causing Picasa Web Albums to be unavailable.

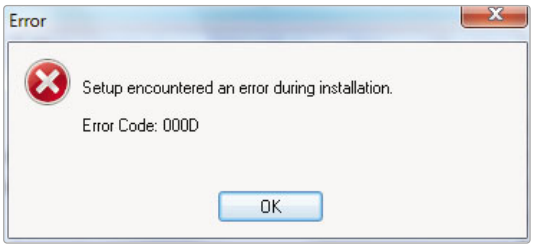
Solution: There is little you can do to resolve the problem, but it is probably a temporary one. Click your browser's Refresh button to make sure a minor glitch didn't fool your browser. If the error message appears again, you can assume that Google is experiencing a problem and is working to make Picasa Web Albums accessible.

According to Google, you may find up-to-date information about major Web Albums problems at its help forums. Visit www.google.com/support and then click Google Help Forums on the left. Next, scroll down to select Picasa. Finally, click Picasa Web Albums. If Google has posted a message about Web Albums' status, it will appear near the top of the list. For more information about this error message, visit tinyurl.com/yfuhbje.

ROXIO SOFTWARE

Error

Setup encountered an error during installation. Error Code: 000D



Translation: If you see this error message, you are likely trying to install Roxio Creator 2009/2010, Easy VHS To DVD, or WinOnCD to a Windows PC from a standard Roxio installation CD. The error message means that an application already on your computer is blocking the installation.

Solution: Roxio recommends temporarily disabling most programs so that you can complete the installation. (You can restart the programs afterward.) To do this, you'll need to open the System Configuration Utility.

To open the System Configuration Utility in WinXP, click the Start button and click Run. Enter **MSCONFIG** in the Open field and then click the OK button. The utility will open.

To open the System Configuration Utility in Vista or Win7, click Start and then enter **MSCONFIG** in the search field that appears just above the Start button. Click MSCONFIG when it appears in the Programs list.

Once the System Configuration Utility appears, click the Startup tab and then click the Disable All button. Next, click OK and reboot your computer.

At this point, you are ready to try the installation again. However, Roxio recommends moving the installation files from the disc to your computer's hard drive (instead of running the installation directly from the disc). To do this, click Start and Computer (My Computer in WinXP) and then right-click the disc drive and click Explore. Click any file and then press CTRL-A to select all files. Right-click any file and click Copy. Create a new folder on your hard drive, open the folder, right-click, and choose Paste. Finally, double-click the Setup.exe file in this new folder.

Once the installation completes, reopen the System Configuration Utility, click the Startup tab, and click the Enable All button. Click OK and then reboot the computer. At this point your computer should run Roxio without producing the error message.

If you are still getting an error message, make sure that your hard drive has at least 2GB (for Creator 2009) or 3GB (for Creator 2010) of free space. That said, you'll want to make sure at least 10% of your hard drive is free so that your computer performs well in general. For more information, visit tinyurl.com/ygvn5cj.

SAGE PEACHTREE

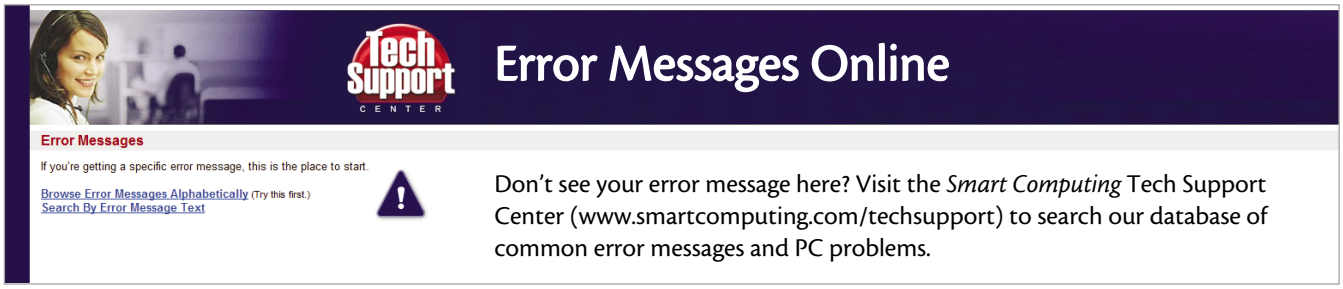
Error

Peach.exe Entry Not Found. The procedure entry point?FEATURE_2007SR1_REPORT_OPTIMIZE@@3QBDB could not be located in the dynamic link library pchup32.dll.

Translation: This error message can appear on a computer running Peachtree accounting software. It is unclear what causes the error, which can prevent the software from operating entirely. The error message typically appears when a user tries to start the program.

Solution: Some users have had success by uninstalling the software and then reinstalling it to the same location as the original installation. This approach hasn't worked for some users, who found that they needed to uninstall Peachtree and then reinstall it to a different folder than the original.

You can move the folder that contains your data to a different folder or drive during this process to make sure that the data is safe. Once the reinstallation is complete and Peachtree is operating without error messages, replace the new version of your data folder with a copy of your own. Peachtree should be able to pull the data from this folder without trouble.



Pest Control
Remove Stubborn Bugs

If your computer has a virus its security software can't detect or remove, it's time to roll up your sleeves and go after the bug yourself. Each month, we tell you how to manually remove some of the most disruptive malware on the Internet. In some cases, software publishers provide free tools that root out deeply entrenched viruses. We show you where to find (and how to use) these removal tools.

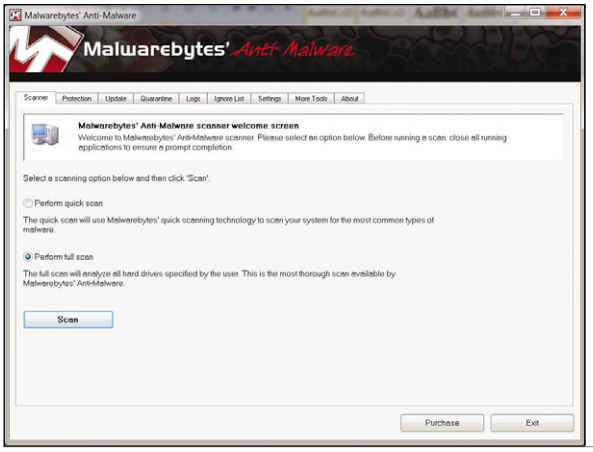
Enterprise Suite

Description. Enterprise Suite poses as a security tool. It uses Web pop-up windows that resemble security alerts to convince users that they're infected with a virus. The fake alerts link to fake online malware scanners that inevitably claim to find multiple infections. The scanners direct users to download and install Enterprise Suite. During the installation process, Enterprise Suite creates several random files, some with troublesome-sounding names such as SICKBOY.TMP. Enterprise Suite then reports these files as malware infections after scanning your PC. Of course, if you want to remove these otherwise harmless files, it's going to cost you. In the meantime, Enterprise Suite continues to pop up phony security warnings. And, naturally, removing Enterprise Suite once it's installed isn't as easy as uninstalling a legitimate program.

How to tell if Enterprise Suite is on your system. This part is easy because Enterprise Suite doesn't try to hide from you. It wants to make itself known and convince you to pay for the full version. If you're getting pop-up security alerts from Enterprise Suite and it's listed in your Windows Start menu, then it's on your system.

How to remove Enterprise Suite using Malwarebytes. Malwarebytes Anti-Malware is a helpful tool for finding and removing a wide variety of malware. A free version is available at www.malwarebytes.org. Start by clicking the blue Download Free Version button on the Web site's main page. Next, click Download Now. Run the installer once the download is complete and follow the prompts. When the installation ends, make sure the Update box is checked before clicking the Finish button. This will ensure you download the latest malware definitions before performing your scan.

Once Anti-Malware opens, click the Perform Full Scan radio button on the Scan tab and then click the Scan button. It will take a considerable amount of time to scan your entire system (the exact time depends on your system's performance and your hard drive size). Once the scan is complete, you should see a list of malware under Scan Results. Make sure a check is next to each entry and click Remove All. Anti-Malware may ask to reboot your PC. Once your PC reboots, run Anti-Malware again to make sure your PC is free of Enterprise Suite.



Malwarebytes Anti-Malware is a trustworthy scanner that is available in a free version. The Full Scan takes a bit longer than the Quick Scan, but it's more thorough and less likely to miss files associated with malware. Once the scan completes, select all infected files and click Remove All.

Rixobot

Description. Rixobot is a worm that tends to spread through removable drives and instant messaging programs. Some reports indicate that the worm may also be able to move through infected network shares. Once the worm makes its way onto

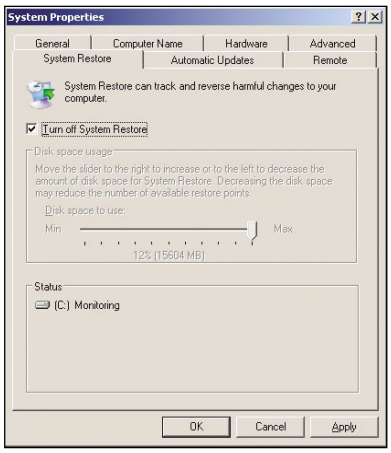
your system, it can open a backdoor that attackers can use to take control of the infected system. In addition, the worm can update itself, making it a bit of a moving target. Some reports indicate that the worm may also be able to disable or circumvent some types of security applications.

How to tell if Rixobot is installed on your system. Unfortunately, Rixobot tries to hide, making it difficult to tell if your system is infected with this worm. Common malware symptoms that Rixobot could cause include reduced system performance, changes to your default browser or your home page, or random shortcuts appearing on your Desktop. If you experience these symptoms, it's best to run a system scan to look for suspicious software on your system. Malwarebytes Anti-Malware (www.malwarebytes.org) is a trustworthy scanner you can download and use free.

How to remove Rixobot using Malwarebytes. It's best to disable System Restore before moving forward. If you create a system restore point while Rixobot is installed, there's a good chance that any system restore will also restore the worm. We will be installing an anti-malware scanner; installing new software can sometimes cause the system to create a new restore point.

To disable System Restore in Windows XP, right-click My Computer and select Properties. In the System Properties window, click System Restore and click the checkbox next to Turn Off System Restore. In Windows Vista and Windows 7, right-click Computer, select Properties, and click System Protection in the upper-left corner of the window. Under Available Drives, select the drive that stores Windows (usually the C: drive) and then click the Configure button and select Turn Off System Protection.

Once System Restore is disabled, visit Malwarebytes' Web site. Click the blue Download button on the left side of the Web page to download the free version of Anti-Malware. Once the download is complete, run the installer and follow the prompts. Before clicking the Finish button at the end of the installation process, check the Update box. This ensures you're using the latest malware definitions before performing your scan.



By turning off System Restore before removing Rixobot, you make sure the worm isn't accidentally preserved in a restore point. Saving the worm in a restore point could cause you to have to remove it again if you need to restore.

Once Anti-Malware opens, select Perform Full Scan in the Scan tab and click the Scan button. The full scan may take a considerable amount of time to complete depending on your system and the size of its hard drive. Once the Scan Results appear, check each item in the list and click Remove All.

After Anti-Malware does its work, it's time to make sure that associated Registry entries are gone. See the "Rixobot In The Registry" sidebar for more instructions. ▌▌

BY CHAD DENTON

Rixobot In The Registry

To make sure Malwarebytes Anti-Malware removed all traces of the worm, you'll need to enter the Registry.

Warning: Making a mistake while modifying your Windows Registry can cause severe errors. Always follow instructions carefully when modifying your Windows Registry. Before making any changes, create a backup of your Registry. To create a backup, click Run in the Windows XP Start menu and type ***regedit*** *to open the Registry Editor (in Windows Vista and Windows 7, type* ***regedit*** *in the Start menu search field). In the Registry Editor, click File And Export. Select a location to save the backup and provide a name for the backup.*

On the left side of the Registry Editor are various Registry keys arranged in hierarchical order (much like a directory in Windows). Navigate to HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Services. Scroll down and look for the kernelx86 key (on the left side of the window). Right-click this key and select Delete. Perform the same for the following keys:

HKEY_LOCAL_MACHINE\SYSTEM\ControlSet002\Services\kernelx86
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\kernelx86
HKEY_LOCAL_MACHINE\SYSTEM\ControlSet001\Enum\Root\LEGACY_KERNELX86
HKEY_LOCAL_MACHINE\SYSTEM\ControlSet002\Enum\Root\LEGACY_KERNELX86
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Enum\Root\LEGACY_KERNELX86

If one of the above entries is missing, simply move on to the next one. After rebooting, run a second Anti-Malware scan just to make certain Rixobot and all its associated files are gone for good. ▌

Fast Fixes

Compiled by Chad Denton

PowerDVD 9 Ultra Update

Update: This update brings CyberLink PowerDVD 9 Ultra up to build 2528. It adds support for DTS-HD (Digital Theater System High-Definition) and Dolby TrueHD file playback as well as the Realtek ALC669/670/892 HD audio codec. The update also includes TrueTheater HD with ATI Stream support and CUDA (Compute Unified Device Architecture) support for video file playback.
Installation: To install this update, point your browser to www.cyberlink.com. At the top of the main page, mouse over Downloads and choose Software Updates. On the next page, click the red, upward-pointing arrow next to PowerDVD. Next, click the Download button next to PowerDVD 9 Ultra Updates and then save the file to your hard drive. Once the download is complete, you can double-click the file to start the installation.

www.cyberlink.com

Security Update For Movie Maker 6.0 For Windows Vista

Update: This update helps ensure that your computer does not become victim to a security issue in Microsoft Movie Maker 6.0 that could allow an unauthenticated remote attacker to control and compromise your computer.
Installation: To download the security update, navigate to www.microsoft.com/downloads, type **KB975561** in the search field at the top of the page, and press ENTER. On the results page, click Security Update For Movie Maker 6.0 For Windows Vista (KB975561). If you have a 64-bit version of Vista, choose Security Update for Movie Maker 6.0 for Windows Vista for x64-based Systems (KB975561). On the next page, click Download in the blue box. Finally, click Start Download on the next page and save the file to your hard drive. After the download is complete, you can start the installation process by locating the file and double-clicking it.

www.microsoft.com

Corel Painter 11 Service Pack 1 Update

Update: This recent update from Corel offers several enhancements to its Painter 11 product, including upgrades to transformations, color management, the copy/paste function, and auto-painting. Enhancements have been made to other areas, including the PNG filter and the color wheel/mixer resizing tools.
Installation: This upgrade can be installed by navigating to www.corel.com. On the main page, mouse over Support and choose Patches And Updates. On the next page, scroll down to the Also Available section and click Full List Of Updates For All Products. On the next page, choose Painter 11 from the drop-down list. Next, click the blue Download button next to Corel Painter 11 Service Pack 1 Update – Windows (Or Macintosh, if you have a Mac). On the resulting page, scroll to the very bottom and click Continue Your Download. On the final page, click Begin Download and save the file to your hard drive. After the download is complete, double-click the file to begin the installation process.

www.corel.com

Compatibility Update For Windows 7

Update: This update works out compatibility issues between Win7 and several applications, where the application may not be installed correctly, is unstable, or does not function correctly. Examples of applications or games that will be compatible after the update include HP TouchSmart, Corel Photo Downloader, Tony Hawks Pro Skater 4, and Spy Sweeper. For a complete list, navigate to tinyurl.com/y9a2cn4.
Installation: To install this update, go to www.microsoft.com/downloads. In the search field at the top of the page, type **KB976264** and press ENTER. On the next page, click the link that reads Update For Windows 7 (KB976264). Choose the link for x64-based systems if you have a 64-bit version of Win7. On the Download page, you may have to validate your copy of Windows by clicking Continue in the yellow box. You may also be prompted to download the Genuine Advantage plug-in, which only takes a moment. Once your OS (operating system) has been validated, click Download, and on the resulting page, click Start Download and save the file to your hard drive. Once the file has downloaded, locate the file and double-click it to start the installation.

www.microsoft.com

Fix Of The Month

Firefox Version 3.6.2

Update: The newest version of Firefox includes fixes for several security issues, including an issue that could let a malicious user execute code on your computer. The update also resolves stability issues.
Installation: To download the latest version of Firefox, point your browser to www.mozilla.com. On the main page, click Download Firefox – Free in the green download box. A new page will appear, and your download should begin automatically. If not, you can start the download by clicking the Click Here link. Save the file to your hard drive. Once the download is complete, locate the file and double-click it to begin the installation.

www.mozilla.com

Q&A

Need help with your hardware or software? Looking for simple explanations on technical subjects? Send us your questions!

Get straight answers to your technical questions from *Smart Computing*. Send your questions, along with a phone and/or fax number, so we can call you if necessary, to: *Smart Computing* Q&A, P.O. Box 85380, Lincoln, NE 68501, or email us at q&a@smartcomputing.com. Please include all version numbers for the software about which you're inquiring, operating system information, and any relevant information about your system. (Volume prohibits individual replies.)

Online

Q I run Windows XP Professional with SP2 (Service Pack 2). I have AVG Internet Security version 8.5.435 installed. I am getting pop-up notices from the AVG firewall saying that "Google Installer is trying to establish TCP connection with remote IP address xx.xxx.xx.xxx : xx. Do you want to allow this connection?" (The number changes each time there is a new pop-up.) There are four boxes for a choice: Allow For All, Allow For Safe, Block, and Help. Sometime in the past, I must have downloaded something to do with Google, and this Google Installer came along with it. The pop-up didn't bother me at first, because I would click Block, and the pop-up would go away for a few days. But now, the pop-up occurs several times an hour, and I have to click a dozen or so times to make it go away. It is extremely irritating, especially because it is right in the middle of the screen so I have to deal with it before I can continue with what I was doing before the pop-up occurred. I have tried to find where on my computer this thing is so I can delete it, but I have had no luck. Can you help me get rid of it? At this point, I just want anything to do with Google off my computer so I can get rid of the pop-up.

A The most likely culprits are either Google's Chrome Web browser or the Google Toolbar. Chrome periodically updates itself to the latest version; this ensures that you have the most secure and feature-complete version. Clicking Allow For All will let Google Installer connect to Google servers and should prevent the message from appearing again. If you don't want to allow it to connect but want the message to stop appearing, you'll probably need to remove Google applications (such as Toolbar or Chrome) from your PC.

In WinXP, click Start and Control Panel. Click Add Or Remove Programs and then click Remove A Program. Highlight the program to remove and then click Remove. Windows will take a few moments to remove the program and might ask you to restart your computer. Look to see if there are any other programs with Google in the title and remove them, as well.

Utilities

Q My WinXP laptop recently crashed, and I lost all my iTunes info. I need to copy my music from my 4G iPod back into iTunes. I have tried several programs, including one or two that guaranteed exact duplication. However, each time there is some music that does not copy in exact order, resulting, for instance, in an opera with the second act being listed before the first act or a third symphony movement before the second. I am trying not having to load all my music CDs anew but am hoping to find an application that will copy in the exact sequence that the music is on the iPod. Do you have any suggestions?

A You didn't mention which applications you had previously tried, but we'll provide what we think are the two best applications for your situation, one that is free and one that will cost you about $20.

The free application is SharePod (www.getsharepod.com). SharePod is a Windows-only application that can import music and playlists from your iPod to your computer, after which you'll need to reimport them into iTunes. Our experience with SharePod has been good, but it is a very bare-bones application.

Our next recommendation is CopyTrans ($19.99; www.copytrans.net). CopyTrans is far more robust than SharePod and explicitly promises to preserve song order in playlists. We tested the trial version with a purposefully jumbled song order, and it successfully

copied the songs in the correct order. Before purchasing CopyTrans, see if it can successfully import one or more of your operas or symphonies.

Online

Q I travel frequently, and though some of the hotels I stay in offer free Wi-Fi access, I need a fast, reliable way of connecting when I'm not near my hotel. Am I stuck trying to mooch access from free Wi-Fi hotspots?

A Wi-Fi is probably the easiest and often the fastest way of connecting when you're traveling, but you'll have to rely upon good luck—there may not always be a Wi-Fi access point available. Many merchants such as McDonald's are now offering free Wi-Fi to entice you to spend lunch or breakfast at their businesses; this isn't really mooching, and if you can fit it into your travel routine, this option can save you a lot of money.

The alternative is one of the newer 3G/4G connection options. Most cellular providers are offering a dongle that plugs into your USB port on your notebook and accesses their networks at broadband speeds. Most 3G networks provide access at roughly 1Mbps (megabits per second), basically the same as a DSL (Digital Subscriber Line) connection. In addition, 4G networks are slowly being introduced in some metropolitan areas and promise even faster connectivity.

The downside of using a 3G/4G network is coverage. The competing cellular providers use different radios in their dongles, limiting any attempts to use another provider's network. Compared to the limited range of Wi-Fi, cellular connections have much more range. The cost of a cellular connection can also be prohibitive, depending on your usage. The prices we've seen are roughly $50 per month, with a cap on the data you can download.

Also, a cellular dongle is limited to providing Internet access to one USB-equipped device. A better option might be Verizon's MiFi Intelligent Mobile Hotspot (www.verizon.com). The MiFi is a useful device that combines a 3G cellular radio with a Wi-Fi access point. The MiFi connects to Verizon's network, and you connect your notebook to the MiFi via Wi-Fi. You can connect up to five devices this way, which is handy if you have a number of computers or devices needing to share a connection.

Verizon retails the MiFi for $269.99, but you can get substantial discounts when you buy it with a contract. As with most other devices, you'll be capped at 5GB of data per month, so be careful that you don't exceed your allotment, or you'll pay a surcharge of 5 cents per megabyte, which can add up quickly.

Hardware

Q I don't get any sound from my analog speakers, but a USB headset works fine. How can I narrow down the problem?

A When there is more than one audio output device, the application that is producing your audio (such as Skype) may have selected an alternative output that you're not expecting. For example, the application may be telling the sound to go to your USB headset rather than the speakers of your sound card. Open the Options window for the media or chat application that you're using and make sure to select the analog speakers as the preferred or default output device.

Next, disconnect the USB headset and reboot the PC. If there is still no sound but the PC still recognizes your sound card properly in the Device Manager, chances are that the sound card's amplifier may have failed. In this case, your best option is to replace the sound card. If you'd rather not mess with an internal card replacement, you can always attach USB speakers to an available USB port instead. Once again, just make sure that the applications providing your sound are using the USB speakers.

Are you having trouble finding a product or getting adequate service from a manufacturer? If so, we want to help solve your problem. Send us a description of the product you're seeking or the problem you're having with customer service. In billing disputes, include relevant information (such as account numbers or screen names for online services) and photocopies of checks. Include your phone number in case we need to contact you.

Letters may be edited for length and clarity; volume prohibits individual replies.

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A Long Delayed Dell & An Unreadable Registration Key

On Jan. 19, I ordered a $2,300 high-end PC from Dell and was promised delivery on Feb. 12. When I placed the order, I expressed my concern that if the delivery was delayed, it might arrive while I was away from home between Feb. 26 and March 1, but the Dell representative assured me that the PC would arrive on Feb. 12. Shortly before the delivery date, Dell called to say the PC was being delayed and that it would now be delivered on Feb. 19. Just before Feb. 19, I got another call saying that the PC would arrive on Feb. 26, the day I was to leave. I called Dell to change the delivery address to my neighbor's house, but Dell's representative told me this couldn't be done. After persisting, Dell ultimately relented, but a couple days before the new delivery date, Dell called to inform me that the delivery would be delayed again, to March 5. I asked to have the delivery address changed back to my own, and although Dell initially resisted, the representative I spoke to agreed to change it. Less than a week later, Dell said they were delaying my delivery again, to March 12. No one at Dell will tell me the reason for the repeated delays, and at this point, I seriously doubt that I will ever get my PC. Thanks in advance for your help.

Miriam Klepper
Delray Beach, Fla.

Although PCs, especially ones with cutting-edge components such as Miriam's, are no strangers to shipping delays, we called our Dell contact on Miriam's behalf to determine what was behind the holdup. Dell's representative responded almost immediately and agreed that the delays were, in her words, "pretty extreme." Less than a week later, Miriam received tracking information from FedEx, and the PC arrived the next day, two full days earlier than the latest delivery estimate. Our Dell contact initially blamed the delayed shipment on an industry-wide shortage of components, but we were unable to get any more detailed information beyond that. Miriam reports that the new PC is running fine, barring a few third-party software issues she has yet to work out.

In July 2009, I purchased a copy of Microsoft Office Home And Student 2007 from Amazon.com. The registration key on the package was partially obscured, so I was unable to activate the software when I installed it several months ago. The software lets me run it up to 25 times before registering, but I can only use it a few more times before it locks me out for not registering. I have included an image of the product key. I hope you can help me out.

Barbara Cooper
Bronx, N.Y.

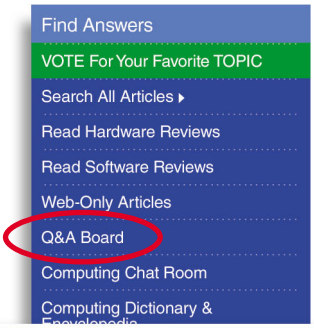
Sure enough, the image Barbara sent us showed the familiar five-part registration key, but the third letter of the first set was not recognizable. We decided to call Microsoft first, but our contact told us that Amazon.com was responsible for resolving the situation. Thankfully, the Microsoft representative was kind enough to send us a link to the Web form for contacting Amazon.com's PR department. We relayed Barbara's tale of illegible-key-induced woe, as well her corresponding order number, and shortly received an automated response that Amazon.com would look into the matter. Two days later, Barbara told us that Amazon.com had shipped her a new copy of Office and a shipping label so she could return the old copy free of charge. Barbara installed her new software and successfully entered the registration key.

Q&A Board

Computers are great when they're running properly. But when you have a computing problem, finding answers can be frustrating. So if you're having trouble with Windows XP or can't find a solution to a computing question or problem, consult the *Smart Computing* Q&A Board. This subscriber-only feature is a great resource for getting quick and helpful responses to your computing problems.

Before posting a question on the Q&A Board, be sure to check out the Tech Support Center and all of its extensive resources, including an error message search, solutions knowledgebase, and troubleshooting articles.

It may also be helpful to utilize the Q&A Board search at the bottom of the page, because most likely, someone has had the same tech woes that you are experiencing. You can search by message number or keyword ("Windows XP," for example) and sort your results by relevance or a specific date range to make finding answers quick and easy.



1. Log on to SmartComputing.com and click the Q&A Board link.
2. To ask your question, click the Post A Question link in the upper right of the page. (Make sure you are logged in to the site.)
3. Use the Subscribe To This Message To Receive Email Notifications Of Answers link that appears after posting the question to be notified via email when answers are posted.

Smart Computing's Dictionary & Encyclopedia

color cast

An undesirable trait of an image where one color overpowers the others. For example, an inkjet printer that uses too much magenta ink may create a print with a red color cast.

Deep Blue

In May 1997, chess master Garry Kasparov lost a chess match to IBM's Deep Blue computer. Kasparov won the first game but eventually lost the match and the $1.1 million prize.

Web-Only Articles

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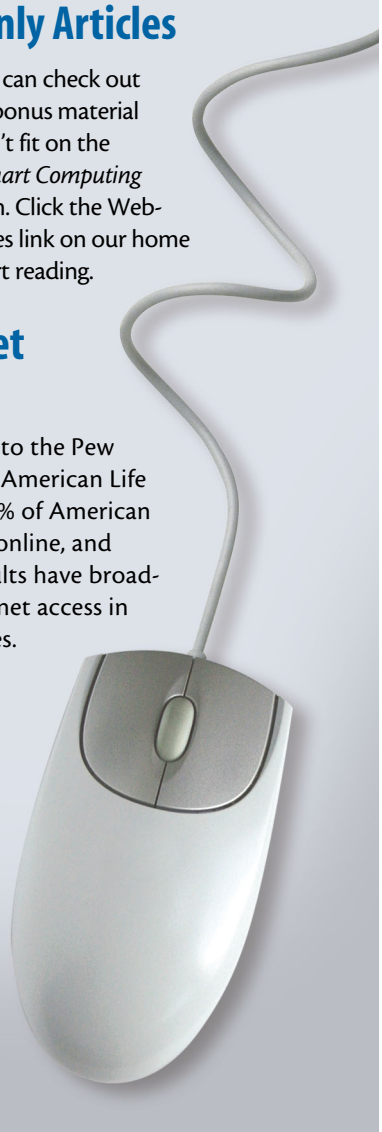
Internet Usage

According to the Pew Internet & American Life Project, 74% of American adults are online, and 60% of adults have broadband Internet access in their homes.



Finding The Lost

We've all experienced terrible moments of instant dread and regret. Some of us have more of those than others, but we can leave my eBay shopping habits out of this. What I'm talking about is the sinking realization that a file you spent hours working on (or have only one known copy of) has just gone missing. Sometimes an application crashes. Sometimes you get careless with the DELETE button. And sometimes you *know* you saw a file recently but can't find it anywhere today. It happens to me all the time, so I've learned a few lessons the hard way.

Maybe it has something to do with my poor eyesight or scattered memory, but the obvious choices always seem to be the ones I miss. I'm usually well into freak-out mode before remembering to check the Recycle Bin. Save your blood pressure and check the Recycle Bin first—that's what it's there for. Sometimes it's tempting during cleanup to skip the Recycle Bin and press SHIFT-DELETE to permanently remove files. If you're wise, you'll limit the use of that trick and think twice before permanently deleting anything, in Windows or in Outlook or anywhere else. Recovery gets much harder (if not impossible) when you've gone out of your way to tell the system your decision is permanent.

I recently deleted the wrong set of pictures during drive cleanup while foolishly using the SHIFT-DELETE method described above. Panic set in until I remembered my backups. In fact, this is the main reason I do backups. Catastrophic drive failures can happen without warning, and I've experienced two or three over the years, but I can't begin to count the number of times my backups have saved me from myself. Thankfully, these were pictures I'd had for a long time, and they'd been through a complete weekly backup cycle. If you're going to use backups as a fallback, however, make sure you know what kinds of backups you have *before* you need them. Windows' System Restore collects system backups (called restore points) and lets you roll system settings and drivers back in time, but it doesn't retrieve individual files. It also wipes out any legit system changes since the restore point. I was recently planning a switch to a particular backup utility, until I discovered that you can't get at your backed-up data directly. You can browse files and restore them via the software's interface, but I need a backup utility that gives me direct access to the individual files and fragments in folders that I specify at a backup location.

When I've lost in-progress Microsoft Word documents, especially following an application or system crash, I've discovered another trick that sometimes works. You may have seen odd files starting with "~$" in your My Documents or other directories. When you're working in Word, the application occasionally creates temp files with the "~$" characters replacing the first two characters of the regular file name. For example, this article titled Column_lostfiles has a temp file called ~$lumn_lostfiles in the same folder. If Word crashes on me, sometimes that temp file will stay in the directory, and I can open it to retrieve my unsaved work. Occasionally, you can even find old versions of those files in a search, letting you recover old drafts. None of this is a substitute for saving early and saving often, especially as those files aren't always available, but I've lucked out and had them save my bacon more than once.

Reconstructing older history can require a little creativity. At work, I recently had to try to reconstruct a timeline around some historical projects that were active before my direct involvement. Original records were either lost to time or had never existed in the first place. So what's a guy to do? IT security constantly reminds us that email never really goes away, and they're not exaggerating. Archived emails, forwarded threads, file attachments, and even server backups are all treasure troves of historical information. So are backup CDs and old USB drives. Sometimes it only takes a minute to find the last version of a file you sent your boss before you accidentally deleted it. Sometimes you'll have to jump through a lot of hoops. How much you're willing to go through is usually a function of how important your lost data is. ▮

BY GREGORY ANDERSON

Gregory Anderson *is a regular contributor to* Smart Computing *and several other technology publications. He keeps a sharp eye (with the help of thick glasses) on computing trends and enjoys working with geeks of all stripes—most of the time. Share your lamentations of lost data at* **gregory-anderson@smartcomputing.com**.

OVATION

Each month, the *Smart Computing* staff gets to work with all kinds of new computing and consumer electronics products. Here are some of the favorite items that recently crossed our desks.

compiled by Joshua Gulick

High-Speed PC And Mac Share Cable

$28.99 | TRENDnet | www.trendnet.com

Picture this: You just powered on your shiny new Mac, and you'd like to copy some important files and your favorite photos, music, and video to it from your PC, so you can enjoy them on both computers. You don't have a network or an external hard drive, but you don't need either to move these files, because you have TRENDnet's new High-Speed PC And Mac Share Cable (TU2-PMLINK). You plug one end into your PC, the other into the Mac, and you're copying files to the new computer in mere minutes.

I like the cable because it just works. As soon as I plugged the cord into the computers and ran the built-in software, I could see the other computer's folders and drag and drop files to transfer them. The cord is 6 feet long and works best with USB 2.0 ports. It also supports Mac-to-Mac transfers and PC-to-PC transfers. The cable is compatible with Windows 2000/XP/Vista/7 and Mac OS X 10.4 to 10.6.

Stick-On Cable Organizer

$12.95 (set of 2) | NewPCGadgets.com | www.newpcgadgets.com

The Stick-On Cable Organizer is the sort of thing neat freaks hope to find in their stockings at Christmas. It's a simple, easy-to-use organizer that supports several cables at once. After you stick the Organizer to your desk (or wall, or other surface) via the included sticker, you can attach cables by pushing them between its two flexible grips. Pulling the cables out is just as easy; that's not the case with typical cable organizers. You can easily attach five USB (or similar-sized) cables to a single organizer.

Vue Personal Video Network

$299.99 | Avaak | www.vuezone.com

If you haven't checked out security cameras these days, you'll be surprised to find out how far they've come. In particular, home monitoring cameras are inexpensive and networkable and provide good quality video.

Avaak's new Vue Personal Video Network (VU100A) is one such home (or small business) monitoring kit. Once you place the two battery-operated cameras, they connect wirelessly to the included Vue Gateway. That's right, no power cords or data cables attach to the cameras. The Vue Gateway itself has a power cord and connects to your network router via an Ethernet cord.

Once you've installed these three devices, you're ready to monitor your home. You can view the video via a browser. That means you can check on your home or office even when you're away, assuming you have access to the Internet.

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